WESSEX

ONE SHILLING AND SIXPENCE

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EDWARD TURNER SIMS LIBRARY.
INTERIOR OF THE MAIN READING ROOM.
Photograph by Nellie Smith.

WESSEX

An Annual Record
of the Movement for a
University of Wessex

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Wessex

An Annual Record of the Movement for a University of Wessex

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FORE-WORD.

WITH the completion of a further ten years in the history of the College, it is natural to enquire what has been accomplished in that period. It would be easy to answer that enquiry by stating what new buildings had been erected, what further equipment provided, what additional courses started and so on, but it is not on such terms that the real achievement of the College is to be assessed. We should rather enquire: For what purpose has this provision been made? and, How far has this purpose been realised?

To the first of these questions we might reply that its purpose is to enable students to acquire a mental equipment which will be useful to them in their lives, qualify them to discharge the duties and responsibilities of the professions they severally adopt with credit to themselves and advantage to the community, and make them good citizens. What sort of equipment is this?

It includes, of course, technical knowledge and proficiency, but it is something much more than that. In the learned professions, in the world of business and the sphere of administration, men recognise when they meet with them not only professional competence but alertness of mind, strength of purpose, sound judgment, insight, integrity, all that we sum up in the word character. There is no unit by which these qualities can be measured but they are no less real than a man's height or weight or the strength of his muscles or his balance at the Bank, things which can be expressed in inches or pounds or in coin of the realm.

Those who ask for "practical results" from a university training will not be disappointed if they include under that term the things they look for and value most in those they meet or employ or consult or put their trust in. The aim of a university education is to fit a man or a woman for making a life as well as for making a living, and

both, if we view them aright, are practical problems requiring a knowledge of material and technique. It is for this reason that the community life in the Halls of Residence is so valuable and so essential a part of a student's university course. The contact between minds of different quality and texture, the impact on each other of contrasting personalities, the impression gained of the diversity of human interests and tastes and opinions and problems—all this brings out faculties never more needed than to-day, awareness, discrimination, tolerance, sympathy, patience. Moreover, the close association and freedom of intercourse amongst the residential students by breaking down barriers makes more easy the formation of life-long friendships, an essential part of the art and practice of living.

I believe we can claim that during the past ten years the College has afforded to successive generations of its students opportunity not only for specialised training but for the development of personality and character and the promotion of fellowship.

Can the College be regarded as having a still greater purpose and responsibility? It may perhaps help us to answer this further question if we turn our thoughts to the time, now more than twenty centuries ago, when Plato was a student in Athens. During the first twenty six years of his life his country was engaged in a disastrous war, in the course of which the old ideals of justice and magnanimity were gradually supplanted by the worship of ruthless force and the cult of intolerance. The sense of spiritual values was swept away by a wave of materialism. It seemed that democracy was a form of government unsuited to the conditions of a changing world and had proved a failure.

The young student, in whose inmost heart the old ideals were enshrined, turned from the disordered world around him, with its distorted values, to the ordered and peaceful realms of the spirit. Thereafter, throughout a long life, he served as a priest before the altars of Truth, Beauty and Goodness, and impressed upon mankind as no merely human being has ever done the sovereignity of these divine attributes.

His influence was not confined to his own teaching for while still a young man he established in Athens the Academy, where for nine hundred years men of succeeding generations gave devoted allegiance to these eternal verities and by their teaching and their lives enriched and ennobled the spirit of man.

During the ten years we are reviewing the world has again witnessed, as Greece did in the youth of Plato, justice scorned,

liberty denounced, reason dethroned and intolerance crowned as a virtue, and men have again questioned whether democracy can anywhere long survive. We live in a period not only of change but of violent upheaval. Long accepted beliefs, ideals, standards, appear to be crumbling and disintegrating. Mankind's loveliest temples have been profaned and its most sacred altars overthrown. It was so in Plato's time and it was under such conditions that he founded the earliest university.

Is not the purpose of the younger academies of our time, as it was of the first Academy in Athens, to give sanctuary, as it were, to ideals which in so many countries have been outraged, ideals the realization of which, imperfect though it has been, represents the highest achievement of mankind? If these ideals are to be saved anywhere from extinction, it is to the free universities of democratic countries that we must look for their succour and preservation. Here, if anywhere, men may still pay homage to Truth, Beauty, Goodness. In these Halls, lecture rooms, common rooms, studies, men and women learn that the good life consists in this, that every other allegiance is made subordinate to these supreme loyalties. Can youth learn anything of greater value to themselves or to the world?

There have passed through this College in these past ten years more than a thousand men and women, now scattered over many counties, countries and climes, and following a variety of occupations and professions. Each has already established a network of relationships—to colleagues, pupils, staff, work-people, patients, clients, parishioners, family, neighbours, friends, all of them fellow travellers on life's journey. If, as a result of their student days here, they have acquired a greater distrust of purely selfish aims as a means to happiness, if they have gained a surer conviction of those eternal values which the greatest and best of men and women have striven for in the past, if they have attained a truer conception of the good life, who can say how far the widening circles of their influence may reach, or compute its value in the world to-day?

If we endeavour thus to assess the achievement of the College during the last ten years, we must again realise that it is something not calculable in figures. It cannot be measured by examination results or by the positions gained or the salaries secured by ex-students. It is not on that account less authentic or significant.

During these ten years I have been closely associated with the College but in the position of an independent observer from outside

of the activities carried on within it. I have seen young men and young women enter as students on a new phase in their lives. With a number of them I have kept in touch and I have watched their response to the influences surrounding them. I have marked the steady maturing of their minds, their growing sureness of themselves and the gathering momentum of their spiritual force, and when at length they have left us I have felt that the hope of the future was with them. It is for them to rebuild what has been destroyed, but on surer foundations. It is they who will rekindle on the altars to Truth, Beauty, Goodness the sacrificial flame lit two thousand years ago and now over half the earth all but quenched. Not until their lives are ended will the full tale be told of what this College has accomplished in these ten years—nor indeed even then, for if they are faithful to their trust they will pass on the sacred fire there where alone it can be sustained, in the hearts of dedicated men and women.

Alas, alas !
Thou hast smitten the world,
Thou hast laid it low,
Shattered, o'erthrown,
Into nothingness hurled
Crushed by a demigod's blow.

We bear them away,
The shards of the world,
We sing well-a-day
Over the loveliness gone,
Over the beauty slain.

Build it again,
Great child of the earth,
Build it again
With a finer worth,
In thine own bosom build it on high !
Take up thy life once more :
Run the race again !
High and clear
Let a lovelier strain
Ring out than ever before ! [1]

S. GURNEY-DIXON.

[1]Goethe's *Faust*, translated, F. M. Stawell.

WESSEX 1928-1938.

THE first number of WESSEX appeared ten years ago. Its aim was described in the original Fore-word as the translation of certain "intellectual and spiritual facts" into "terms of flesh and blood and bricks and mortar," and its task was defined as "to aid the movement to turn University College, Southampton, into the University of Wessex." The University of Wessex has not yet come into existence, but University College, Southampton, has moved forward a long way on the path to full University status. The ideals that underly that development are admirably described in the Fore-word contributed to this number by the Chairman of the College Council. Some details of the development itself are sketched in the paragraphs that follow.

WESSEX was started as an experiment and it has become an institution. It combines the functions of a record of the development of a University College with those of a review of intellectual affairs for a certain part of England. In its pages appear annually accounts of local life and antiquities, and stories and poems by local people, side by side with articles embodying the results of work done at University College and records of college life. The present number for instance, includes an article on an old Wessex craft, an essay on the origins of Wessex, and a story of Hampshire life beside an article on the Lutheran Church in Germany by the lecturer in German, an account of a scientific expedition to a distant country by a member of the Department of Zoology, a description of the new Physics Laboratory by the Professor of Physics, and even a caricature of a senior member of the College Staff who is also a very well-known figure throughout Wessex.

One of the aims of a modern university institution in this country must be to make the great English provincial towns true centres of culture as well as of trade and social life; places where, in Matthew Arnold's words, "the best that is known and thought in the world is learnt and propagated." WESSEX is trying to help University College to perform this function for the people of this historic part of England.

UNIVERSITY COLLEGE, SOUTHAMPTON, 1928-1938.

A SURVEY AND A RECORD.

BUILDINGS.

The buildings of the College have developed very considerably since 1928. The two wings of the main block, together with the semi-permanent buildings of the Engineering Department and the Chemistry and Physics Laboratories, were opened by Lord Haldane, then Lord High Chancellor of England, on 20th June, 1914, but the College was not able to occupy them, as on the outbreak of the War, they were taken over by the War Office as a hospital. In October, 1919, when it was proposed to take occupation, it was found that the new buildings were not sufficiently large to accommodate the College, and many of the wooden huts which had been erected by the hospital authorities were purchased, and in them a large part of the work of the college has been done ever since.

By degrees, thanks to generous benefactors, the necessary lecture rooms and laboratories have been developed. The Botany Building, built out of part of the bequest of the late Mr. George Moore, was opened by the Duke of Connaught in June, 1928. It is situated to the north west of the main building, the sloping ground being utilised to create a small rock garden at the south eastern corner of the building and the excavated soil being taken from the west end and used to form a lawn and borders in front. The building has heated lean-to plant houses along the south and west sides, which afford convenient access to teaching and research material, and are available for experimental plant physiology as they open directly from the building, an advantage possessed by comparatively few other botanical laboratories.

On the ground floor are the departmental library and reading room, photographic dark room, staff rooms and laboratories, a small lecture room, a large lecture theatre (30′×30′), with adjoining lantern room, fitted for projection by lantern, epidiascope, etc., and two physiological laboratories which are used primarily for instructional purposes. On the floor above are a large elementary laboratory (40′×30′), lighted from three sides, a research room, preparation room, sterilising room for bacteriological and mycological work, a room at present used as an exhibit room (but capable of conversion), a laboratory for teaching and research in cytology, and mycology, and a general laboratory for the biochemical, anatomical and systematic work of students taking final degree courses.

The ground surrounding the building is gradually undergoing development as a garden for the cultivation of plants of botanical as well as aesthetic value.

In 1931, a new laboratory block, to accommodate Zoology and Geology, made possible by the generosity of Sir Heath Harrison, was erected at the east end of the College site. This is a two-story block, containing, in addition to four principal laboratories, two small museums, the one for Geology and the other for Zoology, a

departmental library, and two lecture rooms. In addition there is a range of smaller laboratories for the private research of the Professor and his staff, and special research workers. The block is built as two sides of a building to be completed ultimately into a square, the idea being to make it as easy as possible to develop at a future date. Simultaneously with this building there was added to the original main block rooms in which the administrative offices are now accommodated.

In 1931, owing to the pressing need for larger engineering laboratories, an outline scheme, such as would fulfil the estimated needs over a long period of years, was prepared by the department. In this scheme one building was to contain lecture rooms and drawing offices, while a separate building of a different character, situated behind it, was to contain laboratories and work-shops. The first section of these laboratories was built in 1932, consisting of seven bays. The partitions within the laboratory bays are of steel, glazed in the upper part, and are easily removed so that the laboratories can be adapted from time to time with change of circumstances. They have both top and north lighting. More recently a gift by Dr. Montefiore has made it possible to construct a windtunnel in an existing wooden hut. This, though in no sense a permanent building, has proved to be far more successful than could have been reasonably expected, having regard to the very limited time and resources available for its construction. The design is based on a windtunnel built at the Royal Aircraft Establishment, Farnborough, but is very considerably simplified. It is driven by a Rolls Royce car engine, which, in order to reduce running costs, has been adapted to burn coal gas instead of petrol. The tunnel has an open jet 5ft. in diameter, in which remarkably steady speeds up to 100ft. a second can be maintained.

In 1935, the Duke of York, now His Majesty King George VI, opened the Edward Turner Sims Library, provided by the generosity of the Misses Sims, to house the ever-increasing number of books, now standing at 53,500. In addition to providing for the library needs of the College, it also provided the main entrance of the College, the central doorway giving access to a large ceremonial Hall, the Enquiry Office and Telephone Exchange being arranged respectively on either side of this entrance.

On the ground floor, on either side of the Hall, there are six study-rooms, corresponding to what are called seminars in American College Libraries. They are devoted to six Arts subjects—Classics, Modern Languages, English, Philosophy, History and Economics, and in each is kept a small collection of research materials and works for advanced students. These rooms are accessible from the main library by means of internal staircases, so that the books housed in them are available to the staff and students generally, but it was felt to be desirable that for each subject there should be a separate room where more specialised work can be done, and where occasional discussion classes can be held, with books at hand. It is obvious that such discussion classes could not be held in the main library and equally obvious that the greatest possible number of books should be available in the one place; both these demands are met by having separate rooms within the library area.

Rooms have not been provided for the Science departments within the walls of the Library, as it is found far more convenient that these special study and reference rooms should, in the case of science subjects, be in close relation to the laboratories;

and so books and journals which are needed for constant reference in connection with the work done in these departments are still housed in the departmental libraries attached to each one of them.

The ground floor contains, besides the study-rooms, a workroom, cloak-rooms, and stackroom, the last being fitted with steel shelving and containing fire-proof accommodation for valuable books and documents, such as those deposited with the College from time to time with the approval of the Master of the Rolls.

The approach to the main library is by a stairway leading from the entrance hall, and the landing at the top gives access to a square ante-room; this contains the catalogues, books of reference and dictionaries; the library staff have their desks here, and the Librarian's room opens off this area, so that all enquiries can be dealt with without disturbing the occupants of the library. This ante-room or catalogue room, opens directly, without screen or barrier, into the main library. Here the books are ranged on the wall shelves, and in the stacks which project and form bays down both sides of the room. Tables for four students each have been provided in this room, one to each "bay." Two large rooms opening out of the library at each end are being used for books which for various reasons it is best to have separate from the main sequence.

Hampshire is essentially a "brick county" and local tradition has been maintained by using bricks made at Bishop's Waltham exclusively throughout the building. The building is steel-framed and is of fire-resisting construction throughout, the foundation, piers and steel-work being of sufficient strength to carry a Tower, which it is hoped to add in the future, and which will provide valuable stack room as well as giving dignity to the whole building. The joinery throughout is in "Australian Walnut" which is an Empire wood, walnut in colour, but not in texture.

The new Physics Block was brought into use in October, 1937, and a full description of it is given in another part of this volume.

In addition to the buildings here enumerated, plans are in hand for further developments. A new Refectory and Students' Union is to be erected on the site west of University Road, towards which £30,000 has been provided, partly by the generosity of the Misses Chamberlain of Bank, and other donors, and partly by a contribution of £8,000 from the University Grants Committee. On the east side of University Road, provision is being made for the addition of eleven bays to the Engineering Laboratories, and the erection of a block of lecture rooms as a further instalment of the scheme drawn up in 1931. A Gymnasium, and possibly an enclosed swimming bath, are to be provided, and on the other side of the site, in close proximity to the Physics building, a new Chemistry block is to be erected. It is hoped when these are completed that, with the exception of the Assembly Hall, it will be possible to dispense with the wooden huts, which have now given twenty years' service, and are rapidly falling to pieces.

In Swaythling, hard by the men's Halls of Residence, there have been developed the athletic grounds, the gift of Mrs. Claude Montefiore, in 1929. They provide Rugby and Association Football, Hockey, Netball and Cricket Pitches, and hard and grass tennis courts, and the athletic pavilion built thereon was opened by Miss Bertha James in 1931. On the side facing the road, this provides for residential accommodation for the head groundsman. The main part of the ground floor is occupied by the changing rooms and washing accommodation, with showers, for both men and women, while upstairs, across nearly the whole breadth of the building,

there is a large club room with a kitchen in which to provide meals for the visitors and teams. From here a complete view of the grounds is obtainable. Here too are several committee rooms, and in the top story ample storing accommodation and a scoring box. A quarter-of-a-mile away, on the banks of the River Itchen, a boat house has been built on a site given by Mr. B. G. Underwood in 1936. It is a steel-framed building on substantial foundations with dwarf brickwork walls on which rests a steel framework for the walls and roof. The walls are rough-cast with white Derbyshire spar and lined on the inside with matchboard and the roof covered with sand faced tiles. The building accommodates six "eights," six "fours" and six "tubs," and a working bench for the boatman. At the riverside a ramp of over 100 feet has been constructed, and this enables boats to be launched at almost any state of tide. In all, the building programme, including the Halls of Residence mentioned elsewhere, has entailed an expenditure of some £186,000. Of this amount, the College academic buildings account for £76,500, while £97,500 has been expended on residential facilities, and some £12,000 on athletic amenities.

HALLS OF RESIDENCE.

It has been the policy of University College, Southampton, to develop to the fullest possible extent the residential principle. His Royal Highness the Duke of York opened Highfield Hall for women students in 1930. In the same year Connaught Hall was put in hand, and the College now has residential accommodation in these Halls and South Stoneham House for 325 students. The older universities have shown us the value of residential life at a University. Indeed, until comparatively recent times a great many undergraduates were content to profit by residence alone and to eschew learning. Times have changed and the modern universities were more concerned at first with learning alone. It is now realised that young men and women need more than a well-filled community life, more than the cloistered seclusion of a study or lecture-room. Both are necessary and the whole is greater than the sum of the parts. At Southampton there has been created such an atmosphere that learning flows out from the study and the lecture room into the fuller community life of the undergraduate, so that a sense of social obligation, a community sense, contributes its very necessary part to the education of the whole man, whether in the common room, the study or the playing fields. So, side by side with the steady improvement of technical equipment, the College has established its halls of residence.

To live three or four years of one's youth in an active community with a large society of one's own age, offering abundant intellectual and athletic companionship, to have at the same time and within the same walls that privacy which is essential to fruitful study, to find in this combinaton of communal and private life the happiest grounds for the formation of deep and lasting friendships, and, finally, to live this life in dignified surroundings that suggest a tradition at once forming and formed by the successive generations—that is English collegiate life, and that is what University College offers to the students in its halls of residence. It is still too often assumed that this collegiate life is the prerogative of the few, ornamental in its way and undeniably delightful, but becoming increasingly out of place in the hard modern

world. If anyone still has the impression that a modern university is little more than a technical school, he should visit the halls of University College, Southampton.

South Stoneham was bought by the College in 1921. An old Queen Anne House, with grounds of 14½ acres, it has been developed and added to during the course of years, and at present consists of three blocks—Block A, the main house; Block B, which is an adaptation of the existing building, and provides sixteen study-bedrooms, and Block C, a modern addition, which increased the accommodation by a further twenty-two study-bedrooms. The grounds are very delightful, running down to a small tributary of the River Itchen. The whole breathes an atmosphere of dignity and comfort which only an old building can provide.

Connaught Hall, named after His Royal Highness the Duke of Connaught, visitor of the College, was built in 1931, on the site of the orchard of South Stoneham House. The approach is through a high arched gateway which pierces the west wing and faces across a square court a similar arch on the opposite side. The buildings are entirely of warm red brick with red tiled roofs. The proportions are such that the court with its lawns gives a sense of space and nobility, while the buildings themselves suggest quiet and dignified comfort. The quiet atmosphere is expressed in the horizontal lines of the windows and roofs, but any monotony that there might have been in the elevations is broken by the high arches of the gateways in the west and east wings, which rise to the full height of both storeys by the additional storey with its mansard roof on the south side, and by the hall with its high round-headed windows, and its traditional lantern on the north. The plan was inevitably determined by the plan of the old university type of college buildings, and there is, therefore, a fundamental similarity. There are, however, certain divergencies. The builders of Connaught Hall had to think of economy and of comfort. Comfort demanded, for example, hot baths and running water. Economy required that students should be able to get a year's residence at the lowest possible figure. The modern architect with his team of engineers, electricians and plumbers is only too delighted to show that economy and comfort can go hand in hand. So the student has a study bedroom, light and warm, running water and bath-rooms easily accessible, a library and common rooms, and, in the event of accidents or sickness, a well-equipped sick bay. The rooms are grouped around nine separate staircases each with its doorway on the court, so that there are no long passages with rooms strung out along them. This staircase system contributes largely to the privacy and independence of the individual, an independence within a corporate body which especially distinguishes a hall of residence from a mere hostel. The dining hall with its fine barrel roof, its soft harmonies of grey, cream and white, its long oak tables and benches, show that the dignity of ancient tradition can be perpetuated in modern form. At one end of the Hall, doors lead through a passage to the Junior Common Room, with the Library above it, and a gallery which looks down into the Hall. At the other end is the Senior Common Room, and the rooms of the Warden and Vice-Warden. The Senior Common Room is not merely a very pleasant room for the senior members. Like the Senior Common Rooms of Oxford and Cambridge, it constitutes a society which consists of a number of professors and lecturers of the College, who, although not resident in the Hall, take a keen interest in its fortunes, and desire to be closely associated with its communal life.

Highfield Hall, accommodating 104 women students, is built on the site of what was originally a large private residence bearing that name, which had been used by

the College as a hall of residence since 1919. A good deal of the accommodation was in an army hut, a relic of the war years when the building had been used as a hospital, but, unlike South Stoneham House, the old building was ill adapted to collegiate purposes, and accordingly the College Council decided to purchase the house and site, and to build a new Hall thereon. This was largely made possible by the generosity of Miss Charlotte Chamberlain, who has shown a great interest in the Hall since her first association with the College. It was opened by H.R.H. the Duke of York, now his Majesty King George VI, in July, 1930. The new Hall is built on three sides of a square, the wings reaching out towards the Common, Southampton's most beautiful possession. The central block comprises a Junior Common Room on the ground floor, with a dining hall above it; behind the Common Room are the kitchens, to which the serving room on the first floor is connected by means of an electric lift. The fittings of both the dining hall and common room are of oak. Above the kitchen wing are the quarters for the domestic staff, and the upper floor here has been designed as a sick bay. The two wings contain the students' quarters with the necessary offices and "cubby-holes" for tea-making; the study-bedrooms are of good size, are well lighted and ventilated. On the ground floor, at the end of each wing, is a library, facing towards the gardens, which take the place of the Old Hall, and towards the grass and trees of the Common. The gardens are attractively laid out and contain two hard tennis courts.

In addition to the three Halls mentioned above, the College owns the residence of South Hill, Bassett, which was presented to the College by Dr. Montefiore in 1921, for the purpose of a Hall of Residence, and, indeed, it was so used, first of all as a women's hall from 1921 to 1931, before the larger accommodation provided by the erection of the new Highfield Hall was available. Later it was used as a men's hall, from 1931-32, pending the completion of Connaught Hall. South Hill is at present occupied by the School of Navigation, and has been adapted for this purpose, and for the new Cadet School, which has been established by the College for those who are intending to become officers in the Mercantile Marine.

FACULTY OF ARTS.

(Departments of Classics, English, History, Modern Languages and Philosophy).[1]

During the last ten years the most important factor in the development of the teaching of the Arts subjects in the College has been the opening of the Edward Turner Sims Library in 1935. Before this addition to the College buildings was made, students in the Arts departments were dependent on departmental libraries scattered through the college buildings and on a very inadequate central library. The ground floor of the Edward Turner Sims Library is largely occupied by seminar rooms assigned to the different Arts Departments. These rooms contain collections of books suitable for the more advanced students and are used both for private study and for "seminars" or discussion classes. The departmental seminar and the small tutorial group have become more and more adopted in the Arts Departments as substitutes for formal lecturing. In the words of the University Grants Committee's

[1]For the purpose of this Survey the term "Arts" is confined to these subjects. Other subjects such as Mathematics and Geography, which are studied in several faculties, are treated separately.

last quinquennial report, "the distinctive advantage of this system is that the teacher meets the individual student or group of students small enough to make possible a real discussion in which all can take part, so that between the minds of student and teacher there is real give and take. In the more literary subjects at least this is a substitute for the informal intercourse which already exists to some extent in a scientific or medical laboratory. . . . Students are thus enabled in discussion with the teacher and with one another to develop, to clarify, and to correct their own ideas, and this is far more stimulating and educative than any mere assimilation of the ideas of the teacher, however excellent those may be." In these seminars the work takes several forms. Sometimes short papers are read by one or more students and are followed by a general discussion, while the professor or lecturer acts as chairman, sometimes a text is studied under the direction of a member of the staff or even a set debate on a subject connected with the course is organised. The seminars have been frequently addressed by distinguished visitors from abroad such as Professor Walter Schirmer of Berlin, Professor W. Fischer of Giessen, Professor Victor Bohet of Liège, Professor Perry Miller of Harvard, and Professor Herbert Davies of Cornell, as well as by former members of the College staff now holding overseas posts, such as Professor Fred Clarke of Cape Town, Montreal and the Institute of Education, Professor Rutherford of New Zealand and others. These talks, which are followed by questions and discussions, have been of the utmost value in enabling students to know something of the work being done in the great universities of the world. Lately there has been a strong tendency towards inter-departmental co-operation in the Faculty of Arts. Joint meetings of seminars have been held, and lecturers and students from one department have addressed seminars of other departments in the same faculty. The English Seminar has even been addressed by a lecturer in the Faculty of Science. A successful joint course of lectures on the History of Syntax was organised by the Departments of Modern Languages, Classics and English in 1937, and it is hoped this will be a prelude to similar courses in the future.

At the beginning of the decade the staff of the Department of English was strengthened by the appointment of a full time lecturer in English Literature in addition to the professor and the lecturer in English Language. The importance of German studies in the College was recognised in 1932 by the appointment of a lecturer in German. The "lecteur" system of teaching in the Department of Modern Languages was inaugurated by the appointment of the first French lecteur in 1931 and extended by the appointment of the first lektor in German in 1935.

The retirement of Emeritus Professor E. S. Lyttel in 1934 from the Department of History after 23 years' service, and the death of Professor E. W. Patchett, Head of the Department of Modern Languages in 1936, after 22 years' service, deprived the faculty of the services of two of its most distinguished members. Professor Lyttel was succeeded by Professor R. R. Betts, who is now in charge of the Department, and Professor Patchett by Professor A. M. Boase, who has since left to become Marshall Professor of French in the University of Glasgow and has been succeeded by Professor H. W. Lawton, who was for many years lecturer in French (and who is also Art Editor of *Wessex*). Among members of the staff who have taken up appointments in other institutions mention may be made of Professor Alan Sinclair, formerly lecturer in the Department of Classics and now Professor of Greek in the Queen's University, Belfast, and Mr. V. T. Harlow, formerly lecturer in history and now Professor of Colonial History at University College, London.

All the Departments of the Arts Faculty have prepared large numbers of students for the General and Honours degrees of the University of London during the period under review and numerous successes have been obtained. Post-graduate work has also been carried out in all departments though the number of students reading for higher degrees is small, as few can afford to stay at College after graduation unless they enter the Training Department and read for the Diploma in Education. However, the College has often been able to provide help and supervision for ex-students who are teaching in schools and working for higher degrees at the same time.

Mr. G. C. Cook of the Department of Classics, proving to be the best Classic of his year in the London Final Examination for Honours in Classics, whether Internal or External, was awarded a studentship at University College, London, where he has since taken the M.A. degree. Dr. R. E. Witt, another student of the same department and the first winner of the Scholarship founded by the late Sir Henry Milner White, received the Cromer Greek Prize in 1931, and has recently published his study of "Albinus and Middle Platonism" (for which he received the Cambridge degree of Ph.D.) in the Cambridge Classical Series. Mr. J. V. Ruffell of the Department of English has nearly completed a dissertation on the Life and Works of William Barnes, the Dorset Poet, and Mr. J. E. W. Percival of the same department is carrying out research on the Terminology of English Criticism of Poetry in the Eighteenth Century. Miss A. A. Ruddock of the Department of History was awarded a University of London post-graduate studentship in History and is using it to prepare a Ph.D. thesis on Southampton trade in the sixteenth century. Miss E. C. Southward of the Department of Modern Languages is preparing a thesis for the Ph.D. degree on a subject connected with the Arthurian legends.

A considerable amount of research has been carried out by members of the staff of the Faculty during the period under review. At the beginning of the period Dr. S. J. Crawford's distinguished work on Old English bore fruit in his Edition of *Byrhtferth's Manual* (Early English Text Society) and his lectures on *The Influence of Anglo-Saxon England upon Continental History in the Eighth Century* delivered at University College, London, in May, 1931, and since published by the Oxford University Press. Other members of the Department of English have contributed by their publications to seventeenth century studies. Professor Pinto's edition of *The Poetical and Dramatic Works of Sir Charles Sedley* appeared in 1928, his study of the Puritan and Platonist, Peter Sterry, in 1934 and his monograph on John Wilmot, Earl of Rochester, in 1935. Professor Pinto has also published a paper on Isaac Watts, the Southampton poet, in "Essays and Studies of the English Association." Mr. J. B. Leishman's study of *The Metaphysical Poets*, published in 1934 by the Oxford University Press included essays on Donne, Herbert, Vaughan and Traherne. Mr. Leishman has also published three volumes of masterly English verse translations from the poems of Rainer Maria Rilke, the Austrian poet.

In the Department of Modern Languages, Dr. Lawton's work on *Terence and the literature of the French Renaissance* is now complete and he has also been preparing an annotated translation of Du Bellay's *Deffence et Illustration de la Langue Francoyse*. Dr. W. I. Lucas, lecturer in German has been awarded the degree of Ph.D. by the University of Heidelberg for a thesis on German Translations of Shakespeare's Narrative Poems.

In the department of History Dr. J. G. Rutherford has edited two volumes of the Stockwell papers for the Southampton Record Society, and for the same society

Dr. D. B. Quinn, with the assistance of Miss Ruddock, a student in the department, has already produced the first volume of the Southampton Port Books, and the second volume is ready for the press. Professor Betts is working on the Reform Movement in Bohemia in the XIVth and XVth centuries and has published an article on Matej z Janova in the Journal of Historical Studies for 1931, and an article by him on English and Czech influences on John Hus is appearing in the proceedings of the Royal Historical Society this year. Dr. Quinn has also published many articles on Irish history in various learned periodicals. He is at present engaged on a life of Sir Humphrey Gilbert for the Hakluyt Society.

Special mention must be made of the Volume called *Speculum Religionis*, a collection of Essays and Studies by members of the staff presented to Dr. C. G. Montefiore, President of the College, on his seventieth birthday and published by the Oxford University Press in 1929. Contributions to this volume were made by Members of the Departments of Classics, English, History, Modern Languages, Philosophy and Zoology, and only the decision to limit the contributions to essays more or less closely related to Dr. Montefiore's own work prevented other faculties and departments from co-operating with the enterprise.

Within the Faculty of Arts at present, but with the promise of fuller independent development in the future must be mentioned the growth of a small school of Theology. The Professor of Education has always prepared occasional students for Theology as well as for Philosophy in the B.A. Final courses, but since 1928 relationships with Theological colleges at Chichester, Salisbury and Warminster have been fostered; the diocese of Chichester has established two bursaries for Theological students at the College, and even so distant a diocese as Truro has taken similar action. The growth of the Theological School owes much to the Bishop of Chichester, and also to the present Bishop of Portsmouth who, when he was Secretary to "Cactum", (the Central Advisory Committee for the Training of Ordinands for the Ministry) paid several visits to South Stoneham and greatly facilitated the St. Mary's House scheme there. As a consequence, ordinands who successfully complete approved courses in Theology at University College, Southampton, are enabled to count their residence there toward the completion of their training at a Theological College. Of recent years graduates to the College have thus proceeded to the Salisbury or Chichester Theological Colleges. The appointment in 1936 of the Vice-Principal of the latter College (The Rev. F. C. Tindall, B.D.) as Tutor and Lecturer in Theology, was a further step in developing and strengthening the facilities for these studies. His predecessor at Connaught Hall, the Rev. R. M. Pope, M.A., B.D., continues also to render invaluable services to the theological work. Visiting lecturers for such students include the Dean of Winchester (Dr. Selwyn) and the Regius Professor of Moral Theology in Oxford (Canon Leonard Hodgson.)

The Faculty of Arts has received most valuable co-operation from the local Branches of various learned Societies, such as the Classical, English, Historical and Modern Language Associations, which are organised in connection with the respective Departments. These associations maintain a useful contact between the Arts Departments of the College, teachers in the neighbouring schools and members of the general public interested in different branches of academic study. During the last ten years they have brought a large number of distinguished scholars and men of letters to visit the College and to lecture on a wide variety of subjects.

A SURVEY AND A RECORD

FACULTY OF SCIENCE.

(Departments of Physics, Chemistry, Botany, Zoology and Geology.)

During the last ten years the Faculty of Science has seen great developments. Physics has become of increasing importance in industry, and this fact is reflected within the College by the greater appeal of Physics and the increase in the scope and extent of the research in the department. The provision of new Physical Laboratory buildings has made an enormous difference to the teaching, the research, and the general spirit of the department. As far as experimental work is concerned, it is now possible to dispense with makeshift devices necessitated by the lack of mechanical and thermal stability, factors so essential in work entailing precision measurements.

The teaching of the subject has changed during the last ten years largely because of the increase in the actual subject matter. For example, X-rays, Ultra-Violet light, Radio are all concerns of the physicist; and apart from this direct increase in the amount of subject matter itself, increasing mathematical knowledge is required to cope with the new discoveries. Teaching in the Department has been organised on a new basis. With the exception of the first year, the work is organised by subjects, and not by categories of students, for example, all the electricity is taken by one lecturer. This permits the staff to specialise, and gives the student the opportunity of working with specialists. At the same time while the system of lectures, laboratory work and individual work has been unaltered, the emphasis has been shifted. The number of set lectures has been decreased, the laboratory hours somewhat increased, and individual hours have been introduced—there are eight hours in the week set aside when students may count on being able to interview lecturers individually. Again, in the general as well as the special courses, students have been encouraged on occasions themselves to give the lectures, while the normal lecturer takes the position of chairman. Then there is the Physics Colloquium, which meets weekly, and is addressed by lecturers, students, and occasionally distinguished men of science—for example, Prof. Ch. Manneback of the University of Louvain recently came to England for the special purpose of addressing it.

Perhaps the most remarkable feature of this decade has been the growth of research in this Department; twelve members of which this session are engaged in research work. Four are doing research in spectroscopy—two on the Raman effect, one on band-spectra, and one on the electrical measurement of very weak light intensities. Four are engaged in heat research—one on the expansion of tin, two on specific heats, and one on the solution of gases in metals. Another member of the department is researching in X-rays, and another in scientific radio. Possibly the outstanding item in this connection is the collaboration which has arisen through the stay here with us of Professor Weissenberg, formerly Scientific Member of the Kaiser Wilhelm Institut, Berlin. Through the help of the Society for the Protection of Science and Learning and its friends, he has been able to accept the post of Guest Professor at the College. He has been working on the mechanics of deformable bodies, and collaborating with Professor Menzies in theoretical work on molecular vibrations, and he has taken a general helpful interest in the work of the Department. He has had an honorary research assistant recently, who has been working

on a wave-mechanical theory of the formation of heavenly bodies. Research in Applied Physics has not been neglected. The outstanding event in this connection is the research on thermionic valves, undertaken for a well-known electrical undertaking, and financed by them. This work was initiated and directed by Mr. L. G. Carpenter, now at the Royal Aircraft Establishment, and an old student, Mr. T. Harle, who has recently been made an Honorary Research Fellow, carries it on. Other examples of such research done in the department are the spectroscopic testing of petrol vapour for impurities, and the optical testing of piston-ring clearances. In the future it is hoped still further to extend the usefulness of the Department as a centre of physical research, fulfilling the twin duties of breeding physicists and helping to solve the scientific problems of the locality. For the successful pursuit of this aim there are three essentials: a good building, good equipment, and good students. The first has now been provided, and the third to a reasonable extent; equipment is still inadequate, but by ingenuity and the intelligent use of scrap material much has been done, though under difficulties unknown to institutions with greater resources. Furthermore the establishment of a post-graduate diploma in applied physics is under consideration. The course for this diploma would give special training, partly under industrial conditions, to students suitable for posts as research physicists in industry and the Government service. Another development expected is that the Department will take an increasing part in research in medical physics. At present work is going on in connection with ultra-violet light, and on the kind of electrical counting circuits used in radium and artificial radium investigations. Professor Weissenberg has been appointed Honorary Physicist at the Royal South Hants Hospital, and will spend some of his time there, so forming a definite link between the Department and the Hospital. It is hoped that money will be forthcoming for equipment required for all these purposes.

The plans for the new buildings of the Chemistry Department, which are intended to meet the need for up-to-date teaching both for the University students and for the evening technical students, are ready for approval. They include well-equipped senior and junior teaching laboratories, the latter to be furnished, to a large extent, with the benches at present in use in the senior laboratory, a physical chemistry teaching laboratory somewhat larger than the present hut, stores arranged centrally so as to serve the main teaching laboratories easily, and lecturers' and research rooms adequate to provide for reasonable increases of advanced work in the future. The building has been planned so as to permit of easy extension, if the work in either the University or technical side grows; but some provision is now made in the plans for teaching special classes in subjects such as laundry technology or metallurgy. The present buildings available for Chemistry are scarcely adequate for the University teaching; the old army hut which has done duty for a junior teaching laboratory for so many years is in a most unsatisfactory state, and cannot last much longer; and the adjoining hut, recently taken over after being vacated by Physics, is even worse, and would be almost useless but for the presence of two solidly built brick and concrete pillars, which permit of a few square feet of space for apparatus requiring a certain amount of steadiness. The provision of the new buildings is therefore a most urgent requirement.

The College provides not only for the teaching of full time day students, but also, for the needs of "technical" students. At the present time there are technical

students taking Chemistry at all stages from matriculation up to the final honours degree, or the nearly equivalent standard of the Associateship of the Institute of Chemistry; also, at various times when the need was evident, special classes for those working in particular trades, such as the laundry industry, or milk distribution, have been arranged. There is some gain in having the senior technical teaching conducted in the same buildings and with a staff who also take some part in the University work, instead of having two separate institutions for the technical and the University work, as is, perhaps, the more common plan. Before long, however, it will be necessary to strengthen the teaching staff in those scientific subjects for which there is any considerable demand among technical students, if a proper standard is to be maintained; in numbers, at present, the staff is barely adequate to cope with the University work alone, up to the standard which is rightly set by the Universities of this country, as adequate for the honours degree. As soon as, or even before, the new laboratories are ready, we hope that this need will be fully recognised, so that Southampton may have under one management both a University College and a Technical College worthy of one of the most rapidly developing towns in England.

Science is rapidly advancing and changing, Chemistry as rapidly as any other branch. It is necessary for the vitality of any teaching institution that its teachers should be ready to adapt their courses, both in regard to the facts and the theories dealt with, and even in teaching methods, so as to conform to the needs of the day. It is not possible for a teacher to do this, unless he retains an active interest in the progress of his science, and this in its turn is difficult unless the teacher devotes some part of his time to active research. It is pleasant to note that, even under the difficult conditions of recent years, a good deal has been accomplished in this direction; from the Chemical Department 35 papers have been published in Scientific Journals, some of which deal with the constitution of certain alkaloids, one of the most difficult branches of organic Chemistry, on proteins and their constituents, on enzyme action, and a long series of studies on the electrical conductivity of organic acids, a property which sheds light on the configuration of the molecules of these substances, has also been published. During the present session, work on surface films has been commenced in the department, in continuation of the work on which the present Head of the Department has been engaged for many years past. Among examination successes special mention may be made of the achievement of Mr. A. F. Millidge who was awarded the Neill Arnott studentship in Chemistry in 1934. This studentship is given for the best candidate in Chemistry in the whole of the Final Honours examination, whether external or internal. The death of Mr. A. E. Clarence Smith, lecturer in Physical Chemistry, whose work has already been described in the pages of *Wessex*, deprived the College of one of its most distinguished research workers.

The next number of *Wessex* will include a special appreciation of the distinguished work and inspiring leadership of Emeritus Professor D. R. Boyd, the former head of the Department, who retired last year, and was succeeded by Professor N. K. Adam.

It is of considerable interest to note, also, that among students in all Universities there is much discussion as to the best methods to be adopted in teaching, and there appears to be a fairly general desire that instruction should not merely consist of lectures in which the lecturer does all the talking, but that a more active co-operation on the part of the students, by discussion with the lecturer, would be of more value.

In the Chemistry Department every encouragement is given to co-operation by the students in classes, provided that questions and criticism are intelligent and to the point, and lead to elucidation of the subject. Science has grown through active discussion and free, yet ordered, criticism; and the foundations of science are laid in a student's mind through the same processes. The most active co-operation which the student is able and willing to give, and the greatest degree of enterprise and intelligent appreciation of his subject, not only on the theoretical side but also in the laboratory, will always make the best chemists.

Until 1927 the Botany Department was housed in the building now devoted to Physical Chemistry. In 1920 the only accommodation for the cultivation of plants under glass consisted of a very short section of an old army hut which was partially glazed and was without artificial heat. Shortly afterwards, a large heated lean-to plant house was erected at the south end of the laboratory, and this made possible both the development of a useful teaching collection of plants, and more efficient work in plant physiology. The institution of the College Grounds Committee (1920) and the active co-operation of its members enabled the Botany Department to benefit greatly from the gradual development of flower borders and from the continuous accession of interesting and useful plants generously presented by numerous donors. Amongst such gifts were a number of South African plants including many from the Karroo desert collected by Professor E. L. Watkin, and numerous orchids, some new to Kew, have been sent from Central America by Mr. C. H. Lankester. In 1920 the staff of the Botany Department consisted of the Professor and an assistant lecturer. For several years part time assistance was given by a succession of students of whom, one, Dr. R. D. Gibbs, is now Assistant Professor of Botany, McGill University, Montreal, and another Miss E. N. Sparshott (now Mrs. Warren) subsequently became an exceptionally efficient full time Demonstrator and research worker in the Department. The erection in 1926 of a separate laboratory block, made possible considerable developments in botanical work. New methods of investigation have been brought to bear on old and new problems and Botany to-day is linked more closely than ever before to the foundational sciences of Physics and Chemistry. Many of the numerous papers on modern plant physiology look to the uninitiated more like treatises on mathematics than anything else! The researches of botanists into the nature of protoplasm and of such elusive mechanisms as those of heredity, photosynthesis and respiration, entail excursions into the realms of many sister sciences and make heavy demands both upon the material equipment and resources of laboratories and the intellectual equipment of students, teachers and investigators. The urgent need for pressing on with the development of plant physiology became evident soon after the erection of the new laboratories, but not until 1935 did it become possible to appoint an Assistant Lecturer primarily to co-operate with the Professor on this important work. During the past three years considerable advances have been made in the equipment of the two physiological laboratories and in the scope of the instruction given, and others are contemplated. With the addition of a second Demonstrator in 1930 it became possible to give more time to research work. The degree of M.Sc. (London) was gained by Miss E. N. Sparshott for a thesis on "The Origin and Development of the Tuber of *Testudinaria elephantipes*," and also by Miss D. Monk for a thesis on "The Plant Communities of the River

Avon." A series of important papers on leaf-sucking insects was published by Mr. C. G. Johnson, who in 1935 was appointed to a research post at the London School of Hygiene and Tropical Medicine. Mr. A. D. Skelding, who succeeded Mr. Johnson as Demonstrator, is now on the staff of Birmingham University and has recently completed (in collaboration with Miss J. Winterbotham) a paper on "The Structure and Development of the Hydathodes of *Spartina*." Mr. S. E. Arney has pursued a difficult biochemical investigation of the effect of phosphate on the respiration of barley seedlings, a research commenced while holding a D.S.I.R. grant at Oxford. The imminent completion of this investigation will leave Mr. Arney free to proceed with further studies of respiration, especially that of the strawberry plant. Some preliminary ecological work on the vegetation of Warren Point, a mobile area of shingle near the mouth of the Beaulieu River, and on that of the Hurst Shingle Bank, has been carried out by the Department, and it is hoped to continue this in collaboration with members of the staff of the Department of Geography. It is also hoped that with the co-operation of the Poole Harbour Board ecological studies of the mud binding grass *Spartina* may be facilitated in that area.

During the period under review, the teaching of Zoology and Geology has gone forward continously. When the Department started in 1920 there were classes only for Preliminary Scientific Zoology and Intermediate B.Sc. in Geology. By 1928 full courses for B.Sc. Final in both subjects had been instituted. The course for B.Sc. Honours in Zoology followed, and when the London University syllabus was changed, this was succeeded by the course for B.Sc. Special in Zoology with Entomology as the branch to which detailed treatment is given. It has been impossible hitherto to offer a course for B.Sc. Special in Geology owing to inadequate staffing in this subject. Last session (1937-38) marked the arrival of the first postgraduate student who is proceeding to a Ph.D. Degree in Zoological research. Important research has been done by members of the staff. Mr. F. W. Anderson was awarded the degree of M.Sc. Leeds, for a paper dealing with a group of fossil corals, and Dr. J. Berry the Ph.D. degree of St. Andrews for a thesis on salmon research. The Staff has also in recent years played an important part in scientific expeditions, some of which have been described in the pages of *Wessex*. Mr. F. W. Anderson accompanied the expedition organized by the Scott Polar Research Institute to Iceland as Geologist and Zoologist in 1932, and has published several important papers in scientific journals embodying the results of this expedition. Mr. F. C. Stott went in the following year with the Oxford University Expedition to Spitzbergen and Mr. H. P. Moon in the present issue of *Wessex* describes his experiences as freshwater biologist to the Percy Sladen Expedition to Lake Titicaca in the Andes. The completion of the new Zoological Building in 1930, has provided facilities for work which it was impossible to carry out in the old wooden huts. It has enabled the College to accept valuable collections which have been presented to the Department from time to time, and in it Geological research was initiated by Mr. F. W. Anderson. A number of important collections have been presented to the Department of Zoology and Geology in recent years. They include the Morey Collection of Isle of Wight Geological Specimens, the Moberley Collection of New Forest Butterflies and Moths, the Mitchell Collection of Ceylon Animals and the Pennington Collection of Shells. Special mention must be made of the Cotton Collection of British Birds, formerly housed by the Corporation of Winchester and transferred to the College in

1936. This collection, described by the Professor of Zoology in a former issue of *Wessex*, is particularly valuable, not only because of its size but also because many of the specimens are rare and some even extinct.

The last few years have been occupied to a great extent with a specialised piece of work, the Avon Research, of which, up to the present session, the Professor has acted as Honorary Director. In 1932 the College was asked to undertake a biological survey of the Hampshire Avon by the Hants Rivers Conservancy Board. The preliminary meeting was addressed by the Professor of Zoology on the aims and objects of a Freshwater Biological Survey and it was decided to finance a scheme of work to be undertaken at the earliest possible opportunity. It was agreed to begin the survey with research work on salmon under the direction of the Professor, and Mr. John Berry, B.A., was appointed in a full-time capacity as his Research Officer. For the past five years annual reports have been issued, dealing with such problems as "blackspot" disease, weed control, hatching and stocking experiments and many others. In 1934 an advisory Committee of the Development Commission visited the College laboratories and also the River Avon and as a result the Development Commission approved the work in hand and on their recommendation the Treasury has since given a grant of £200 annually. This sum enabled an Assistant Research Officer to be appointed. Plans are at present in hand for placing the work on a permanent basis by the establishment of the Freshwater Research Station (incorporating the Avon Research), of University College, Southampton. This Avon Research was undertaken with the object of studying the factors limiting the productivity as a salmon river of the lower reaches of the Avon. The River was found, however, as time went on, to have a fauna and range of habitats of exceptional richness. From the beginning the enormous scope of the work was realised fully and it was seen to be far more than one Department could possibly cope with. Co-operation with the other Departments of the College was sought, and valuable help and advice was given by members of the Staff of the Departments of Chemistry, Engineering, Geography and Physics and also by a band of specialist workers including Mrs. Howland, Dr. Butcher, Mr. Pentelow, Mr. Hall and Mr. Hockley. The Research on the Avon has become widely known. The five Avon Reports to date contain, among other contents, some fifty different papers on matters of freshwater biological interest. From abroad enquiries have been received from Canada, New Zealand, Malaya and Japan, to name only a few, and a large and regular correspondence has arisen with freshwater fishers all over this country. If, in course of time, a team of workers can collaborate in this investigation, first class results of real and permanent value to all interested in freshwater fishery problems will undoutedly be secured. There is definitely scope for development in Entomology in connexion with either Freshwater Biology especially on the ecological side concerning the life histories, food and feeding mechanisms of insects, or in connexion with Forestry. Both branches of this work are of great economic importance. Many freshwater problems will never be settled until a sound knowledge of the ecology of the rivers and ponds is built up. A beginning has already been made by Mr. Moon on ecological problems and by Mr. Hockley on feeding mechanisms and also by Mr. Hall on the use of "flyboards." It is hoped that with the establishment of a special freshwater biological research station, this branch of Zoology may become one of the chief types of scientific work associated in the College.

For Geology the College has one of the best areas in Great Britain—in fact this region is classic ground. There still remains much to be done in field geology, and in Palaeontology also and in the more modern methods of examining and grading soils and gravels for economic purposes. Such a wide field and such excellent opportunities await exploration in the area, that it is hoped that this work may have facilities to continue and develop in the years to come.

Contact between teachers of science in the Universities and the schools of the country is effectively maintained by the Science Masters' Association and the Association of Women Science Teachers. At a meeting held at University College on 29th January, 1938, a Southern Counties Branch of the Science Masters' Association was formed, and some sixty members have joined up to date. A Committee under the chairmanship of Professor S. Mangham, Dean of the Faculty of Science, is at work arranging a programme of activities for the new Branch.

FACULTY OF ENGINEERING.

In the Faculty of Engineering there have been important developments in the work of teaching and investigation and also in the number of students during the last ten years.

The loan of certain experimental engines and apparatus made by the Air Ministry in 1932 and housed in the extension of the laboratories described above (p. 109) was later converted into a gift and has served as a nucleus upon which a really satisfactory internal combustion engine laboratory has been built up That laboratory now gives exceptionally good facilities for instruction of Degree students, part-time students and those taking the more definitely practical minor courses associated with the motor trade. The wind tunnel constructed in the same year (see p. 109) has proved very satisfactory for instructional purposes and for some quite useful investigations of a purely aeronautical character which are in hand. Another piece of special apparatus which has been constructed is a motor vehicle comparator. On it the rear wheels of a vehicle can be mounted so that they drive a water brake dynamometer, which gives a measure of the power actually transmitted by the wheels. It is possible by this means to run a complete vehicle under conditions which reproduce remarkably well those met with on the road. The unit has proved very useful for the practical instruction of Motor Vehicle mechanics.

In developing the teaching of the Department the object has been to blend satisfactorily together the facilities provided for students reading for the External Engineering Degrees of London University with those provided for the courses which are not normally taken by full-time study. The part-time courses are of great importance because they enable a student who has elected to proceed to practical work at a comparatively early age to study simultaneously those technical subjects which are an essential part of his Engineering education. They lead to the Associate Membership examination of various Engineering Institutions and the Associate Fellowship Examination of the Royal Aeronautical Society. Regular courses for National Certificates in various branches of Engineering have always been regarded as important, and have now been supplemented by courses in the general principles of practical trade processes. Thus every stage from the

essentially practical one in which the craftsman is interested, to the more advanced theoretical work which will prepare students for an Honours Degree in Engineering, is covered.

Electrical Engineering was formerly attached to Physics, but in 1931 it was brought within the Engineering Department. The recent transfer of Physics into a new building has left vacant a semi-permanent building which has been converted into very good laboratories, reading room and staff rooms for Electrical Engineering. The transfer is almost complete and constitutes a great improvement.

Among the subjects which have been developed in recent years Aeronautics is deserving a special mention. The construction of the wind tunnel made it possible to provide practical instruction in Aeronautical work. Although for a time this instruction was given to students only as a supplement to their normal Degree course, it soon became clear that there was a considerable demand for regular instruction in Aeronautical Engineering of a standard which would enable students to take the Aeronautical papers of the London Degree.

It is characteristic of the development in all Engineering education that more and more importance is being attached to practical laboratory work. Obviously the National Certificate courses depend largely upon a specified proportion of time devoted to laboratory work and a definite standard to be achieved, but even in the degree curriculum the University of London has wisely introduced an arrangement whereby "course work" has to be submitted by each student as proof that he has given proper attention to practical experimental work, design and drawing.

This increased recognition of the value of laboratory work, taken in conjunction with the greatly increased number of students, has made larger laboratory and workshop accommodation most urgently necessary. The delay in providing this accommodation has proved a most unfortunate handicap to the work of the Department.

An important part of the practical experience which a student gains while undergoing his Degree course is the work in Survey Camp which has for many years been held in the New Forest during the Easter Vacation. This not only gives students experience in making representative Surveys under conditions which they are likely to meet in practice, varying from considerable heat to heavy snow, but does teach them something of the art of living in camp and organising the day so that the great majority of it is available for serious work as distinct from the more usual camp duties involved in keeping alive and comfortable.

It has been possible during the last ten years to establish local branches of a large number of Engineering Institutions. Previous to this period the College already had its own active Engineering Society, consisting partly of students and partly ot external members. Its meetings afforded opportunity for discussing subjects of Engineering interest and bringing students into contact with Engineering work similar to that which they might expect to meet on leaving College. The establishment of local branches of all principal Engineering Institutions has, however, extended these facilities very greatly. Not only have students a very wide choice of lectures, but the College has come to represent in the Engineering world of the district a focus to which engineers come for lectures which will assist them greatly in keeping up to date with modern developments in every branch of Engineering. It is probably fair to say that in each week throughout the session one or more, usually two, lectures to a branch of an Engineering Institution are held in College.

It has, during the last five years, been found that students completing their courses in the Department obtain well paid work with remarkably little delay. There can be no doubt whatever that there is a great demand for students who have successfully passed any of the various courses of instruction available in the Department.

The facilities available in the Engine Laboratory made it possible to undertake work in connection with the improvement of the silencers of motor bicycles. This work proved successful and received very wide recognition and considerable financial support from the manufacturers. It was subsequently extended to include, not only exhaust noise, but also inlet noise and certain of the other sounds emitted by motor vehicles. The work has been found to have many useful practical applications and has been described in lectures in London and at four provincial centres.

The rapid development of the Aircraft industry in this area makes it probable that aeronautical problems will form a large proportion of the investigations which ought to be undertaken. For this purpose a better wind tunnel housed in a permanent building and designed to allow quicker and more accurate working, will be essential. Alternative designs of such a tunnel are being carefully considered, so that when the opportunity arises it may be promptly and correctly taken.

FACULTY OF ECONOMICS.

The aim of economic and social studies is to apply scientific methods of investigation to some of the problems which individuals and societies face in the task of getting their livelihood. A Faculty of Economics in a modern university thus has a special opportunity of serving its area by throwing light on its economic and social problems, alongside of its general work of developing the methods of its science and adding to our knowledge of national and international problems. This has been the objective of the Department in the ten years under review, both in its research work and the training of its students.

Thus, in 1931, was published the Southampton Civic Survey, in which members of the faculty collaborated with the Civic Society in gathering data bearing on the town planning scheme. Dr. Ford was asked by the Royal Commission on Unemployment Insurance to undertake a special survey of the conditions of unemployed persons who have been disallowed benefit. The report was published as an appendix to the Commission's Report. A further investigation into the poverty and housing conditions of the area was published in 1934 under the title of "Work and Wealth in a Modern Port." As a result of the methods developed in this work, Dr. Ford was awarded a Leverhulme research grant for an extensive survey into family incomes and means tests covering many towns in different parts of the country. The Unemployment Assistance Board courteously gave special facilities for the investigation. With the assistance of Mr. G. V. White the problem of excessive competition and retailing was investigated by an extensive statistical inquiry covering twelve large towns, and all towns in the West Riding of Yorkshire.

The same general policy has been followed in the training of students. Some of the College scholars in Economics are now doing valuable research work. Mr. P. W. Andrews, who did some pioneer work on the capitalisation and work of post-

War companies from the records of Somerset House, is now on the research staff of the Institute of Statistics, university of Oxford. Mr. R. C. Tress, who was the first student outside the older universities to be awarded a research scholarship at St. Deiniol's, Hawarden, is now in the Department of Economic Research, of the university of Manchester, investigating certain aspects of regional unemployment. For obvious reasons, Faculties of Economics in modern universities have special functions to fulfil to those already engaged in business, and most of them have special courses in the evening for such students. The relations between this and the full time university work is always an intimate one. Here in University College, evening classes have risen from 10 to 27, and the number of students from 153 to 229. The special classes for the staff of the Southern Railway Company, held at Southampton and Brighton, have become a valued feature of its work. Students from the evening classes have obtained open College scholarships and have proceeded either to business or into academic work.

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As the work of the Departments of Geography and Mathematics belongs to several faculties, the development of these two departments is recorded separately in the following paragraphs.

DEPARTMENTS OF GEOGRAPHY AND MATHEMATICS.

Geography, during the past ten years, has developed on the foundations laid by three distinguished Professors, C. B. Fawcett, W. H. Barker and O. H. T. Rishbeth, each of whom made his characteristic contribution and each of whom would approve the work of the others. To Professor Rishbeth, in the main, the department owes its collection of maps and its laboratory equipment. To them all it owes its belief that sound geographical knowledge is founded on field work and map study.

Growth in the department, from the student point of view, resolves itself into facilities within the College itself, facilities within the area, and facilities for travel. The last are the most difficult to provide, though there has grown among students the understanding of the importance of the geographical study of landscape at home and abroad, and the will to make the most of every opportunity of expert guidance. The College could not be situated in a better area. It offers a wide choice of relatively simple problems for the undergraduate and a great number of highly complex ones for the research worker. Inside the College the department, though exceedingly well-equipped, is scattered and mainly in temporary buildings. Its greatest immediate need is a compact and permanent home with a library-maproom as its core. Teaching students and the study of the surrounding area are the most valuable tasks geographers in Southampton can undertake; and in the last few years the second has come to the fore. It is essential for the teaching that it should do so. Work is going ahead in connection with shingle spots, with landforms in the Test Valley and with wind in the Solent and Southampton Water. On the side of human geography the subjects of greatest interest are agricultural geography and types and distribution of populations. There seems every likelihood that hydrographic work will be further extended in the very near future, and important investigations undertaken at the request of a public body.

The Department of Mathematics has shown steady progress and is now recognised as holding a key position in the Faculties of Science and Engineering. It cannot point to any spectacular development in buildings or equipment, for the needs of the more purely laboratory subjects such as Physics have naturally had to be considered first, but its internal expansion has been none the less real. The past few years have been marked by two changes in the headship of the Department. Professor E. L. Watkin retired in 1931 after nine years of devoted service, and was succeeded by Dr. R. J. C. Howland, under whose inspiring guidance the Department became widely known as a centre of mathematical teaching and achieved an international reputation as a centre of research, particularly in aeronautics. Latterly, too, it has become known for its original work in certain branches of geometry. A branch of the Mathematical Association, founded shortly after Professor Howland's appointment, has become a meeting-ground for mathematical teachers in the Southampton area. One of the outstanding features of the Department is its section of the College Library, which, for its size, is probably one of the best collections of mathematical literature outside the great centres. It contains practically all the well-known treatises and text-books, as well as many of the leading British and foreign periodicals, and is constantly being added to by gifts and regular purchases. On the Technical side there has been a small but steady demand for evening Degree Courses. This demand has been met to some extent, and it is hoped that there will be considerable developments in that direction when the forthcoming reorganization of Technical teaching has been effected. In short, the steady progress of the last ten years makes it possible to look forward to the future with the greatest optimism. It is hoped that the Department of Mathematics will before long have centralized quarters of its own, that the staff, whose numbers have steadily increased during the past few years, will continue to expand as the range of departmental activities increases, and that the equipment of the existing Mathematical Laboratory will be improved and added to. Research will be encouraged both for its own sake and because of the stimulus it gives to teaching, and the closest possible contact will be maintained with other scientific departments, particularly those of Physics, Engineering and Navigation. In this way it may be hoped that the Department of Mathematics will fill adequately its unique position as the representative of a subject which is both an independent branch of learning and an essential part of the exact sciences.

THE TRAINING DEPARTMENT.

The two outstanding features in the history of the Training Department during the past 10 years have been the remarkable development of the four-year courses which actually began in 1928, and the way in which the emergency requirements of the Board of Education for the revival of the two-year course was met by the College. In 1928 the Training Department reached a position in which it was safe to transfer from the traditionally combined courses in which students under the Board of Education read for their degrees and their professional qualifications concurrently, to the four-year plan in which the professional studies are concentrated for the most part in the fourth year and the three under-graduate years are almost wholly devoted to the University course proper. This transition was accompanied by an

increase in the established recognised numbers which stood in 1928 at about 203 places. During the past 10 years this four-year course has been maintained at a very high level of efficiency and the Board of Education students have acquitted themselves in every Faculty and in every subject with considerable distinction. High honours have been obtained in every Arts subject, in every Science subject, in the Faculty of Economics and from time to time in the Faculty of Engineering, for the Board of Education does not exclude from the four-year course those who desire to take a technical qualification. In developing the four-year scheme the Professor of Education has naturally concentrated very largely on multiplying contacts with the best public and secondary schools within the College sphere of influence so that school practice in the fourth year might be run on the best possible lines. As a result the school practice ordinarily taken on two days a week throughout the session has been changed to a scheme whereby every student gets a full term of teaching practice in a public or secondary school, as well as a reasonable period of practice in the new types of senior schools which have sprung up in Southampton and Hampshire during the ten years under review. So extensive has been the development of this scondary school practice that graduates from the Training Department are now to be found doing teaching practice in schools as far apart as the Hulme School, Oldham and St. Lawrence College, Ramsgate, Christ's Hospital, Horsham and Marlborough, the big secondary schools in Southampton and Winchester, and in similar schools in Bradford, London and elsewhere. It is only through the devoted labours of an all too small Departmental staff that this work has been developed so successfully. The professional examination taken is that of the Cambridge Teachers' Certificate, the most distinguished of the University qualifications in pedagogy and the College is recognised as an internal College for the purposes of this examination and the Professor of Education has been a member of the Board of Examiners continuously for over 10 years. But in 1929 the expected immediate raising of the school leaving age impelled the Board of Education to ask University Departments to take in additional students on a two-year basis and the College readily responded to this request and 160 students were immediately added. This cost the College immense labour, energy, time, organization and led to extensions in various directions. It hastened the development of the residential Halls and was primarily responsible for the building of Connaught Hall. The 160 students thus received proved to be of an excellent type. A very considerable proportion of them were fitted for University courses, but for private reasons were obliged to limit their training to two years, but these students conferred a lasting benefit upon the College in its corporate and musical developments, its sports and athletics, and there is no doubt that their departure in 1934 was a severe blow to the College in many ways. But the delay in the raising of the school leaving age and the persistent drop in the number of children in schools necessitated the curtailing of the two-year plan as revised by the Board of Education, and in 1934 the last of the two-year students left the Training Department.

During the past 10 years there has been another change in which the College has participated, a change of national significance. The Board of Education which had hitherto conducted the examination of two-year students ceased to do so after 1928 and a system of Regional Boards was introduced. University College, Southampton took its due part in this work. The Southampton Joint Board functioned very fruitfully in association with the Training Colleges of the Immaculate

Conception and King Alfred's College, Winchester, and after some years of friendly co-operation of this kind the scheme was ended and the Southampton Joint Board amalgamated with the Western Joint Board under the auspices of the University of Bristol. This enlarged Joint Board has recently been still further enlarged by the inclusion of the South West Joint Board so that all training Colleges west of Southampton come within the examination system of the enlarged Bristol-Southampton-Exeter Joint Board, more technically known as the Western Joint Board. The only College in this area not figuring in the scheme is Salisbury, which from the outset came under the University of Reading.

STUDENTS FROM ABROAD.

Southampton is a convenient centre for students from abroad and it is not surprising that these have arrived in increasing numbers in recent years. Most of them have come with the definite intention of improving their knowledge of the English language and have therefore followed courses in general phonetics, speech fluency, English grammar and composition, and English literature and constitutional history. Others, with an already fair command of the spoken language, have come to attend more advanced courses in the Department of English, to study methods of education, or to read Physics, Chemistry or Engineering. In the present Session, for the first time in the history of the College, there are foreign students at work in all the five Faculties.

In this concourse of the nations our nearest neighbours, France, Belgium and Holland, have been almost continuously represented during the last ten years. Since the establishment of the British Council four years ago, there has been a notable influx of Scandinavians from Norway, Sweden and Denmark, and of men and women from the Baltic countries, Finland, Estonia, Latvia and Lithuania. These have included in their number some very capable linguists who have inspired others by their enthusiasm and who by their very presence have stimulated philological studies in the College. Bursary students have also been sent to Southampton by the British Council from Poland, Switzerland, Czechoslovakia and Yugoslavia; from Spain, Portugal, Italy and Greece; from British possessions in the Mediterranean, such as Malta and Cyprus; from Egypt and Iraq; from Uruquay and the Argentine Republic, and from the smaller British colonies in north-west Africa, Gambia and the Gold Coast. Private students, reading in the Faculties of Education and Science, have come from India, Burmah and China.

For many years, with regrettable intermissions, the College has been visited by undergraduates from the universities of Germany who have come as "exchange students." Attempts have been made, but without success, to institute a scheme of exchange students with Denmark. In the near future it is hoped that such a system with an even more extended scope may be established with France. Thanks to the enterprise of Mr. Gilbert P. Bailey, a member of the Phi Delta Theta fraternity and an undergraduate of the University of Indiana, an exchange of students has been inaugurated with that American University, and it is to be hoped that Mr. Bailey will be the first of a long line of American students in Southampton.

To enable those overseas students who are primarily interested in education whether as teachers or as administrators to see as much as possible of English schools

at work and at play, a sessional programme of visits to various types of schools, ranging from the most recent kindergartens to the most ancient Public Schools, has been devised by the Professor of Education in collaboration with his departmental staff. The heads of schools have shown extreme kindness and courtesy towards their visitors on these occasions, offering them facilities to inspect every phase of school life and giving them opportunities to discuss points of interest with the teaching staff.

A sessional programme of visits to places of archaeological, historical, geographical, artistic, industrial and general interest has also been planned in conjunction with the International Service Committees of the Southampton Rotary Club, of the Winchester Rotary Club, and of the Southampton Round Table. They have not only negotiated the necessary, and often delicate, formalities in connection with these visits, but they have also supplied guides and have even undertaken transport. Week by week in term, they have entertained a foreign guest at their regular luncheon parties, introducing him to prominent citizens with whom he may have something in common and thus giving him the chance of making contacts and seeing something of English home life.

Meetings of the various societies and clubs at College are well attended by these students. Two years ago the Cosmopolitan Club took its place in the list of College societies and it began to meet on Sunday evenings, first at the Sussex Hotel and afterwards at the South-western Hotel, and to organise entertainments and excursions. This Club owed its inception more particularly to an energetic and talented German exchange student, Mr. Günther Köntges, of the University of Marburg. Its aim is to bring overseas students into closer and more effective touch with their English fellow-students in all years and in all faculties and to give English and foreign students alike the opportunity of meeting such townsfolk as are specially interested in international affairs. The Consular Corps in Southampton has taken an active interest in the Club from the beginning and has its own representative on the Committee, and again Rotary and Round Table have generously given their valued support. Great credit is due to the first President, Mr. C. P. Cook, and to his successor, Miss Irene Foster, for their devoted service to the Cosmopolitan Club and for their tactful leadership at its weekly gatherings.

TECHNICAL EDUCATION.

That Universities are themselves concerned with technical education has rarely been conceded, although in practice almost every university has made provision through its Faculty of Engineering and in less direct ways for technical education. But it is now more generously appreciated that true scholarship and learning are to be found in the field of the applied sciences and in the application of sciences to industry and commerce as well as in the traditional field of the Humanities. University College, ever since its foundation, has borne the whole burden of technical education for its area in its own premises, largely through the devoted labours of Emeritus Professor Eustice, former Vice-Principal of the College. But during the past ten years it has become increasingly apparent that the services thus rendered by University College to technical education needed not only more room for expansion, development and improvement but also more generous support from both the

central and local education authorities. A scheme has now been approved whereby the Education Authority of the County Borough of Southampton and the Hampshire Education Authority bear the larger part of a capital expenditure of over £100,000. This will enable the College not only to provide the Physics building, now happily completed, but also a new Engineering Block and a new Chemistry Block and the long standing burden of well nigh a quarter of a century's habitation of huts will be appreciably eased.

This material improvement in the position of the College with regard to technical education will enable it to render still greater service to industry and business in the area which it serves. Great strides in this branch of the College's activities have taken place since the appointment of Mr. H. T. Harry as Executive Officer for Technical Classes.

The expansion in the work of the Evening Technical Department during recent years has been very marked, both from the point of view of student enrolments and expansion of curricula. The evening enrolment for the session 1937-38 totalled over 1,000, as compared with 387 during the session 1923-24. During the past ten years class hours instruction have risen from 3,282 to 7,000, and student hour instruction from 40,000 hours per session to over 60,000 hours per session. During the session 1937-38, 156 evening classes were held per week, as compared with 80 per week ten years ago. During recent years every session has witnessed the inauguration of new classes on the Engineering, Commerce and Arts and Science sides. The College has continuously aimed at supplying the needs of technical instruction for the area served, and classes in new subjects have been formed wherever an adequate student response has justified the procedure.

On the Engineering side, evening courses are now available in Mechanical, Electrical, Aeronautical and Civil Engineering (Building Trades), and Shipbuilding and Naval Architecture, and students are prepared for the various National Certificate and Institute examinations in these subjects. Aeronautical interests have increased very considerably in the Southampton area in recent years and the College has kept apace with these developments by providing technical instruction in aircraft construction, aerial navigation, and courses designed to meet the requirements of the Ground Engineer staffs at the Air Port. Developments in Automobile Engineering have included the provision of classes suited to the needs of garage employees, particularly for those desirous of obtaining qualifications as mechanics. In addition to the courses enumerated, many students are prepared for various City and Guilds examinations in building subjects, various branches of Plumbing, Carpentry and Joinery, Welding Processes, Boilermaking, and Wagon and Coach building for Southern Railway employees from Eastleigh. Under the new building scheme provision has been made for greatly increased facilities in laboratories, machine shop, drawing office and class room accommodation for engineering technical students, and the completion of these buildings will enable the College to expand its activities on the engineering side.

Other courses instituted during the past five years include Milk Technology for employees in the milk-distributing trade, Laundry Technology for those engaged in the Laundry industry, special courses in Telephony for employees of the General Post Office, Wireless Technology for both retail salesmen and wireless engineers, Sanitary courses to prepare students for the Sanitary Inspectors' examination of the Royal Sanitary Institute, and Workshop Process classes for those engaged in bench work in various engineering activities.

On the Commerce side, group courses are available to prepare students for Degrees in Economics and Commerce of the University of London, for the Endorsed National Certificate in Commerce, a qualification of growing importance to those engaged in commercial pursuits, and the professional examinations of important examining bodies including the Institute of Bankers, the Incorporated Secretaries Association, the London Association of Incorporated Accountants, and the Society of Incorporated Accountants and Auditors. Special courses are arranged for Local Government officials who desire to sit for examinations held by the National Association of Local Government Officers. Courses have also been periodically arranged to meet the requirements of Clerks in Law Offices. Commercial activities include classes in Accountancy, Costing, Auditing, Currency and Banking, Economics, Mercantile Law, Secretarial Practice and Commerical Correspondence, Speed and High Speed Shorthand.

In Arts and Science students are prepared for the London Matriculation examination, and examinations leading to degrees in Arts and Science of the University of London, as well as for the entrance examinations to many branches of the Civil Services. Classes are available in English, Modern Languages, Classics, History, Geography, Pure and Applied Mathematics, Botany, Chemistry and Physics.

Full time day technical courses are attended by students preparing for the examination of the Pharmaceutical Society, and during the present session over seventy students have been attending day part-time courses in engineering subjects.

On the whole it can be said, without fear of contradiction, that the College has devoted a considerable part of its energies to the development of these technical studies, and it has done so in the full belief that so long as each side recognises the importance of the other, combination of university with technical work can only be for the good of both.

DEPARTMENT OF NAVIGATION.

The Department of Navigation was founded in 1932, and for the first three years it appeared to be doubtful whether the College authorities were justified in starting a Department which was unique as far as the University institutions of this country are concerned. Their prescience was justified, however, and since the autumn of 1935, when Captain G. W. Wakeford was appointed Director and the Department was entirely reorganised at South Hill, Bassett, it has grown from 29 students to 250 students in the present Session.

A number of new courses have been instituted, the most important being the residential Cadet Course and the provision of instruction in Air Navigation for officers and men of the Royal Air Force, the Royal Air Force Volunteer Reservists and numerous pilots from the civil air lines. This rapid growth has prevented much research work, but the staff have collaborated with H.M. Navigation School in the rewriting of the Admiralty Manuals of Navigation and the Senior Lecturer, Lieut. W. J. V. Branch, R.N.R., has been collaborating with Lieut. Commander P. V. Weems, U.S.N., in the production of "short cut" methods for air navigators. Great credit has been reflected on the Department by Mr. H. Stewart who won the Royal Society of Arts Medal by securing the highest marks in Great Britain for the Board of Trade Extra Masters' examination in the year 1937—the highest professional academic honour obtainable by a British Merchant Naval Officer.

EXTRA MURAL STUDIES.

It is generally recognised that one of the most important functions of a modern university institution in this country is to send teachers outside its own walls to carry out the work of adult education. Like *Wessex* the Department of Extra Mural Studies at University College, Southampton, is celebrating its 10th birthday, although the foundations had been laid before by the Southampton University Extension Society on the one hand and the Joint Committee of University College and the Workers' Educational Association on the other. The Department came into existence in 1928, when Mr. Kenneth Lindsay (now Parliamentary Secretary to the Board of Education) was appointed as first paid Secretary.

The development of the University Extension side of the work was especially notable. After Mr. Lindsay's appointment courses were held at Newport, Sandown, Basingstoke, Hambledon and Boldre. In the following year new centres were opened at Aldershot, Andover, Alton, Worthing, Southborne and even so far afield as Bridport, and the development of the work continued so that in the academic year 1930-31 thirty-two courses were successfully organised.

The work of the Joint Committee was also growing. With the redivision of the W.E.A. district and the appointment of Mr. J. H. Matthews as Southern District Secretary in 1929 pioneering was extended, and a substantial body of Tutorial Classwork came into existence. In the year 1930-31 Tutorial Classes were organised at Southampton, Portsmouth, Gosport, Eastleigh, Winchester and Bournemouth, besides many One-Year and Terminal Classes. In 1932 the growth of the Department led to the appointment of the first Tutor Organiser, Mr. J. M. Cameron. Mr. J. Parker was appointed Extra Mural Secretary in 1934, and since his appointment the work of the Department has made remarkable developments. At present, in addition to the Head of the Department, there are two Tutor Organisers at work, Mr. J. Armstrong in West Sussex and Mr. W. Taplin in East Dorset.

During the Session 1937-38 successful courses of grant earning University Extension Lectures have been organised at Alresford, Alton, Boldre, Botley, Hamble, Hursley, Lymington, Portsmouth, Romsey, Southampton and Winchester in Hampshire, as well as Cowes, Niton and Sandown in the Isle of Wight, at Chichester and Worthing in Sussex, and at Wimborne in Dorset. Seven Tutorial Classes are also in existence as well as eleven One-Year Classes and a large number of terminal and short courses under the Joint Committee.

It can therefore be claimed that University College, Southampton is carrying out to the full the important function of providing adult education for a large area in the South of England.

VACATION COURSES.

The residential facilities of the College have always been utilised by outside bodies for short vacation conferences, but it was not until 1934 that the College itself undertook the provision on a considerable scale of Vacation courses embodying many new and original features. As a result of simultaneous approaches from the British Institute in Paris and the Education Authority of Hampshire it was decided to combine a course for English teachers with a parallel course for French visitors. Professor Cock was appointed Director and the success of the Vacation Courses has

been largely due to his skilled and energetic organisation. The first Anglo-French Summer School was accordingly opened on July 28, 1934, by the Parliamentary Secretary to the Board of Education. The 1934 programme provided five separate courses on "England in Adversity"; five courses for teachers in junior schools, and six for teachers in senior schools. In addition excursions, evening lectures by eminent publicists, and much civic and private hospitality characterised all the Summer Schools in successive years. The 1935 Summer School provided six courses on English institutions and ten courses for English teachers in junior and senior schools. The 1936 programme was signalised by a new departure in the provision of special courses for Head Teachers only, under the general title of the Next Ten Years in Education, while "Contemporary England" was the main subject of the courses for French visitors and included some remarkable lectures on Contemporary Art, Architecture and Music. In 1937 yet another original form was given to the summer school in the organisation of a Youth Congress at which employers of labour and teachers jointly conferred on the problem of youth in the last year at school and the first year at work.

These summer schools have been extraordinarily interesting and beneficial, it may fairly be said, to all who participated in them. The cordiality of the relations established between the French visitors and the English members was deeply impressive; no one can say how much was due to the remarkable success of the corps of "student guides." The fact that South Stoneham Association should have been established in Paris, where it meets regularly under the fostering care of MM. Brandreth, Chaffurin and Roth speaks for itself.

In the four Summer Schools so far held over one thousand five hundred students have been in attendance: let us hope that conditions in France and neighbouring countries will permit the ardently desired resumption of the courses in the summer of 1939.

THE LIBRARY.

The library facilities of the College have been completely revolutionised in the last ten years. As early as 1930 the Senate adopted a scheme for the re-organisation of the library and the appointment of a full-time academic librarian and an assistant librarian. This scheme was put into operation in 1932 when Miss D. P. Powell, M.A., was appointed the first academic librarian of the College, and the Edward Turner Sims Library, which is described on p. 109, was completed in 1935.

Quite apart from the administrative efficiency which the new Library building has facilitated, and the inspiration which its beauty gives, the massing of resources in one place has a definite educational advantage. Not only does it produce the atmosphere essential to a University, but it gives an opportunity to students to get to know something of subjects not necessarily those of which they make a specialised study. It is true that students reading for a degree have not much time to make an exhaustive study of books outside those required for their particular examination, yet it is of the greatest importance that they should have the opportunities of making the acquaintance, at least, of the standard literature of other subjects. The impulse to explore outside the narrow tracts of "set books" and "prescribed reading" may be just the factor of difference between vocational training and a

university education. Now, with the resources of the library centred in one building, harmoniously planned and comfortably furnished, there is every encouragement for students to act upon this impulse and acquire these wider intellectual interests which should be among the most valuable results of a university education.

In 1930 the Library was considerably strengthened by a non-recurrent grant of £1,000 from the Treasury. Large collections of books have also been given by Sir George Kenrick, Dr. C. G. Montefiore, Mrs. E. W. Patchett and the German, French and Portuguese governments. During the last ten years 13,662 books, exclusive of pamphlets and journals, have been added. The main reading room is capable of shelving 40,000 books. The present shelves are almost full; about 5,000 books are housed in Study Rooms, about 10,000 in Stack Rooms and a further 5,000 in Science Departmental Libraries. The Library was approved as a depository for manorial and other records by the Master of the Rolls in 1933. Several hundred documents have been received for safe-keeping in the steel cupboards specially designed for this purpose. In addition to providing for the needs of members of the College the Library endeavours to serve the local community by providing facilities for external readers who are engaged in serious study or research. A large number of external readers have made use of these facilities during the last ten years, and particularly since the opening of the Edward Turner Sims Library.

THE APPOINTMENTS BOARD.

The subject of the career of students is daily receiving more and more attention in the universities of the country, and they are practically all following in the footsteps of Oxford and Cambridge who for long have had their well organised Appointments Boards. University College Appointments Board dates from 1930, but, long before that, heads of departments had taken a very close interest in the future of their students, and had acted, each in their own particular interests, as appointments officers. This practice, indeed, still continues, but the system is now co-ordinated by a duly constituted Appointments Board, which consists of a Chairman and Secretary, an internal committee and an external committee. The internal committee is composed of the heads of the departments of Engineering, Education, Physics, Chemistry, Economics, Botany and Zoology, together with three representatives nominated by the Faculty of Arts, and three co-opted members; the External Committee consists of representatives of industry and commerce. The former is the Board's Advisory Committee as to the suitability of candidates for particular posts; the External Committee advises students with regard to their careers, and assists the Chairman and the Secretary in tabulating the various openings within their own particular experience. There are thus two main lines of activity carried on by the Board; on the one hand, it acts as a Careers and Information Bureau, which is very valuable in collecting all the information with regard to the careers possible for university students; on the other hand, it is strictly an appointments board which, in co-operation with heads of departments, has been successful in putting students in contact with possible openings of employment. In this direction the Board has had great success, and at the present time it may safely be said that, except in the profession of teaching, the students of the college not only find suitable employment, but also to a considerable extent are able to pick and

choose between alternative posts. In the education service, there is, of course, a considerable amount of unemployment, but scattered over the country, and, indeed, over the world, there are large numbers of graduates of University College who are teachers in responsible posts varying from university appointments and headmasterships of secondary schools to important posts in education as far afield as China, India, South West Africa, East Egypt, Australia and Canada.

There is a steady stream of students into commerce, and both men and women graduates have justified their appointment to important administrative posts in large commercial undertakings. A very large number of research chemists and works chemists has passed out of the chemistry department, and taken up appointments ranging from Government Service to positions in industrial concerns in places as far afield as India and China. Physics Graduates of the College receive a warm welcome in a variety of quarters. In the last four years no less than five have passed into the service of the General Electric Company, and many others are scattered over the country in various positions, including appointments at the Royal Aircraft Establishment at Farnborough, the Forestry Products Research Association, and the Admiralty. One Physics Graduate has become Principal of a College in India. Engineering graduates, again, are to be found in most parts of the world, and, indeed, here there are many more openings reported to the Board than can be filled by the number of applicants. Men and women with a Geography degree, too, have found their way into a great variety of walks of life—commerce, cartography, the hydrographic service and social service. Numbers of students, too, have passed into various departments of the Civil Service, into the Army, Navy and Air Force; the College is now recognised as one of the university institutions empowered to recommend candidates for nomination to Commissions in the Regular Army and in the Royal Air Force.

THE STUDENTS' UNION AND STUDENT LIFE.

The existence of a body of students is the fundamental condition for the development of a University institution. This is admittedly a platitude—but it is one which must not be lost sight of, since it leads to the conclusion that a criterion for assessing such a development must be the extent to which it has been directed towards the provision of improved and extended facilities for study, recreation and residence for its students. A review of the main developments in Student life and in the Students' Union during the past ten years must therefore of necessity include frequent references to the general development of the College which has taken place during that time. Moreover, it is only against this background of expansion and improvement that the true significance of the activities and developments directly initiated by the Students' Union becomes apparent—in some cases, in fact, they were only made possible as a result of the general advance.

The augmentation of the existing accommodation through the opening of Highfield and Connaught Halls has meant that a very large proportion of the total number of students is residential—a particularly healthy state of affairs in view of the fact that the experience and influence of life in a University Hall of Residence, and all that it implies, form an exceedingly important part of that education for

life which the modern student demands from his University. The importance of this aspect of University life was stressed in the recent report of the University Grants Committee.

The conditions under which students pursue their academic courses have been practically transformed by the building of the new Library as well as the Botany, Zoology and Physics Blocks. The opening of the Turner Sims Library by the present King must surely stand out as one of the most significant occurrences in the history of the College. Those students who remember the difficulty of working in the rather cramped and often gloomy Departmental Libraries and study-rooms can never fail to appreciate the opportunities for undisturbed concentration which the Turner Sims Library and its study-rooms provide.

As a result of the transference of the former Main and Departmental Libraries to the Turner Sims building, a further development of very considerable importance in student life was able to be effected. The Union Common Rooms and administrative offices had previously been situated in isolation from each other—the Men's and Women's Common Rooms being at opposite ends of the main building while the offices were in one of the huts. In 1935, these were all transferred to the rooms along the top corridor at the north end of the main building, so that a definite Union quarter was formed. An extension of Common Room accommodation was provided in the form of a Joint Common Room—an innovation which has been more than justified by its popularity. The Joint Common Room houses the newly-formed Union Library, which is intended to fill the gap felt to exist between the main Library, which is naturally almost purely academic in nature, and the Hall libraries, which tend to be mainly of a light, recreative nature. The books which are being obtained for the Union Library therefore include, besides a certain amount of good fiction, books on Music, Art, Drama, Athletics, etc. The appearance of the Common Rooms has been improved this Session by the purchase of a few good reproductions of works by modern painters and by artists of the Dutch School.

In 1934 a complete revision of the Union Constitution was undertaken—a task of no mean proportions. The objects, duties, rights and powers of the Students' Union, the Students' Council and the Union Societies were more clearly defined. The Faculty, in place of the Year, became the basis of Students' Council representation. Besides various social activities some of the Societies have arranged a number of Faculty Society Lectures and discussions, on topics of interest not only to members of that Faculty but often to other students as well.

Midway in the Session 1935-6 there appeared the first issue of a weekly student news-sheet—*Wessex News*—the publication of which has been continued up to the present. The policy of the paper is first, to give accounts of the main student activities which have taken place during the previous week, and secondly to act as a forum for open discussion on a wide variety of topics of immediate interest to students. The paper has a wide circulation among friends and past students of the College. Few, even of its critics, would deny the important part it has played in fostering the already strong corporate spirit in the Union.

One of the main features of a successful University institution should naturally be the diversity of outlook—political, social, religious, intellectual—of its students. It has therefore been gratifying to note that increasing numbers of foreign students have been attracted to the College in recent years. The Cosmopolitan Club welcomes these students on their arrival, and helps them to make the most of their stay. The

weekly meetings of the Club provide opportunities for the interchange of ideas and opinions between our own students and those from overseas.

The College Scout Troop, formed last Session by the College Rover Crew, to serve the district in which the College is situated, has completed a very successful first year's working. A camp was held in the Isle of Wight last year, and another is being organised for this summer. Not only is the Rover Crew doing a valuable service for the boys of its Troop, but its activities have also served to widen the circle of people interested in the College. A similar type of work has been undertaken by the College branch of Toc H, which has established contact with one of the boys' clubs in the town, and has organised socials and sing-songs for it.

This session has seen the formation of an O.T.C. in the College, with an initial membership of between fifty and sixty students. A number of candidates have been entered for the O.T.C. Certificates "A" and "B."

That a close correlation usually exists between physical fitness and the capacity for sustained mental activity would be denied by no one. Hence the steady development of the Athletic Union and the improvement in the facilities available for its activities have been features of our student life in recent years whose value it would be difficult to over-estimate. The Sports Pavilion, described on p.110 was opened in the Session 1931-2. In the Summer of 1935 the spacious new Boat House, opened by Ian Hay, replaced the small, awkwardly situated hut at Woodmill. The Boat Club thus has ample accommodation not only for the boats it already possessed, but also for the shell and clinker eights which have since been acquired. The narrow upper stretch of the river with its tortuous bends and over-hanging vegetation, has been abandoned for the open—though, unfortunately, tidal—lower stretch. While on the subject of Rowing, we must not fail to mention the recently formed but already strong Women's Boat Club.

In the Summer of 1935 the new hard tennis courts—reputed to be equal to the best in the district—were opened by G. P. Hughes, the Davis Cup player, and a one-time member of the College Staff.

Two new clubs have recently been incorporated in the Athletic Union. One of these, the Women's Boat Club has already been mentioned. The other is the Fencing Club, which this year took part in the Universities Athletic Union Championships—entering teams for each of the three classes—Foil, Epee and Sabre.

It may be mentioned that some 75% of our men students take part in one or other of the activities of the Athletic Union. The figure for women students is nearly as high. These figures must compare more than favourably with those of most other Universities and Colleges.

The developments of the past few years have not been confined to internal activities. Closer relations have been established with other Colleges and with the National Union of Students. In January, 1936, the N.U.S. held one of its Executive Meetings at Connaught Hall. Last Session we acted as hosts to the Annual Congress of the N.U.S. In the Easter Vacation this year the International Student Service held an international conference at Connaught Hall on the subject of "Peaceful Change in Europe." The 1937 Congress, on the subject of "Graduate Employment," was undoubtedly one of the most successful and significant in the history of N.U.S. The report which was subsequently issued received the interested attention of a very wide circle of people interested in university education and its problems. The discussion at the Congress revealed, among other things, a need for the development

of the Appointments Board System, with a view not only to assisting students to obtain suitable posts, but also to giving them opportunities for finding out the qualifications, academic and otherwise, needed for various professions and occupations and the prospects in them at any time. The Union is therefore attempting to encourage a larger membership of and greater interest in, the College Appointments Board, and it is hoped to arrange a series of talks on particular professions and occupations open to students, by persons well qualified by their personal experience, knowledge and interest to speak on these subjects.

The Students' Council is also at present considering a recent report issued by the N.U.S. on the subject of Student Health. This report puts forward the point of view that the "Universities should accept a great measure of responsibility for the physical as well as the intellectual well-being of their students" and stresses the need for the provision of some form of student insurance against illness—recommendations which were included in the last report of the University Grants Committee.

The above survey of past and present will have revealed the close connection between many of the developments of student life and in the students' Union, and the development of the College as a whole. As far as the future is concerned, we can at least be sure that the conditions of student life here will be very considerably affected by developments which are promised for the near future. The building of a gymnasium and swimming-bath will mean a very valuable addition to the existing facilities for physical recreation. Even more momentous will be the completion of the long awaited Union and Refectory building, the effect of which must assuredly be to strengthen the position of the Union, and increase its corporate spirit.

THE SOCIETY OF OLD HARTLEYANS.

Ten years ago the Society of Old Hartleyans was a mere infant of five years old. The original "Association of Past Students of Hartley University College" had been started in 1905. Between then and 1923, there had at times existed the Southampton Society of Old Hartleyans, the London Society of Old Hartleyans, the Portsmouth Society and, for a short time, a Welsh Society. Of these the Southampton Society was the only one to have a continuous existence. After the natural depression during the War years, the Society took on new life in the 1921-2 session, and expanded to such an extent that in 1923 its scope was widened to include all past students of the College wherever they might live. So from that session the Society has been known as The Society of Old Hartleyans, and has included among its members past students in all parts of the world.

During the ten years, the Society has had its ups and downs as all such associations must have. The membership, taken as the number paying a subscription for the current sessions, has fluctuated between 226 and 447. The peak was reached in the 1925-6 session, and it is curious that that is exactly the number who have paid a subscription for the present session to the time of going to press; since there are still three months of the session to run, it seems that there is every prospect that 1937-8 will mark another high level for numbers.

Several of the smaller functions have been suppressed during the ten years, and efforts are now concentrated on three major functions per annum. The Dance during the Winter term, the Dinner during the Spring term and Reunion during

Whitsun week-end. These functions are by no means confined to members of the Society, and for two recent functions notices were sent out to over 4,000 past students of the College.

Apart from these social functions, the outstanding activities are probably the performances of the Dramatic Society, now so well-known in the town. As a result of these public performances the Society has contributed just over £100 to the College Appeal Fund.

When the Appeal was launched in 1926, a committee of past students was elected to see what could be done among the Alumni of the College towards helping the Appeal. As a result of their efforts a sum of just over £1,100 was collected during a period of years and has been handed over to the College. No tangible asset has yet been purchased with this money, but it is possible that in the new buildings, some gift of this value will be included. Only two things have been decided, namely that it shall be of direct benefit to the students, and that it shall in some way perpetuate the name of our Founder.

The Society's magazine, the *Gobli*, is now in its fourteenth year of publication, and is issued free to members. The letters of appreciation which follow each issue show how glad members are to have news of their contemporaries.

The Society has always been fortunate in being able to find enthusiastic and energetic officers, and its Executive Committee is by no means a figurehead. The introduction of a life membership fee two years ago, and the number of members already taking advantage of this method of paying their subscription augurs well for continued prosperity in the future.

THE RUSTIC LOVER TO THE GODDESS.

(From the French of Du Bellay, 16th century).

By W. Walter Gill.

HAVING after long despair
Wrested from my gentle foe
Proof that she will grant my prayer,
Though her shyness whispers '*No*,'

Thee I bring this daisy-chain,
Wanton Venus, and I bring
Rosebuds whose red blossoms feign
Well the lips of her I sing.

Stealing softly through the shade
Won I from her kisses three,
But no more the maiden paid
Of her golden debt to me;

For while we were kissing—hah!
Still I tremble, still I blush—
There I spied her fierce mamma
Peeping from behind a bush!

Now for Thee these flowers I cull;
But if Thou wilt render her
To my plaints as pitiful
As she to mine eyes is fair,

I'll a myrtle dedicate
By the lazy-winding Loire,
And Thy fame perpetuate
On its rind in verses four:

'Thenot of the tuneful flute
Sanctifies to Venus this
Myrtle, and gives Her to boot,
Self and sheep and all that's his!'


H.W.L.

WESSEX PORTRAIT GALLERY, No. 3.
A. A. C.

Extract from an unpublished "Dictionarie of Classick Mythologie."

MERCURIE (or HERMES, as the Greekes doe calle him) was first worshipped in Arcadia, whence his worshippe spredde over the world unto these regions, where now his chief cultus, in the town that was known to the Romans as CLAUSENTUM, is found in two temples, to wit the Collegium Hartleiense and that known by the letters S.S.H. He teaches the inmates of the former Arts of Publick Instruction and Philosophie; in the latter he is a Tutelary, and the letters stand for *Simulacrum Sagacissimi Hermae*, as it is said. In this region also is he known by the letters A.A.C., which are to be interpreted *Audacissimus, Acerrimus, Celerrimus* . . . he that is most daring, most sagacious and most swifte. He hath a wide worshippe on the Continent of Europe and his fame spreadeth even in the New World, where he is said to have visited the people. In Gaul, as Caesar sayeth in his *Commentaries*, he is much beloved; him they hold to have been the Inventor of all the Arts, the Guide of all Roads and Ways. And it is also said of him that he hath brought hither to these regions many of the inhabitants of Gaul to his temple of S.S.H., where he hath for the space of fifteen days in the summer seasoun instructed them in all Arts, but doth no longer so. Among the Britons of these parts and of the whole Iland he is known as a Teacher of all Knowledge, as a speedy Traveler, and as a Herald of Zeus or Jupiter. The Greekes had many names for him, among the which some are translated into our own tongue, as Strophaios, he that standeth at the doorpost; Empolaios, the Negotiator; Erionios, the Luck-bringer or Helper; Hegemonios, Hodegos and Enodios, the Leader and Indicator of the Wayes, and also Diaktor, with the like meaning. Not only has he speede, but is also the patron of them that speake or teach in the Commonwealth. He is held to have invented and indeed presideth over the employment of divers usefull things as the alphabet, numbers, the Cultivation of the Olive Tree and the like, and he is invoked by them that are questioned by the State Philosophers and Academicks. He hath a great devocioun among the women of this Iland, especially for his eloquence in the speaking of the words of the Poets. Many visible attributes are his, among which especiallie a travelling hat with swift wings, a herald's staff with twined serpents which typifieth his ingenious speech, rapid winged sandals that beare him with the speede of Lightening over the face of the land. In some partes also he hath as an embleme on his wristes, a COCKE, the signe of vigilance, which also is a herald of the New Light. The tales which auntient writers tell of him, as concerning the stealing of divers cattle, the saving of Bacchus from the flames, the leading of the Three Goddesses to Paris and the like can in no wise be credited by his worshippers, but are to be accompted idle Inventions, craftilie designed by them that have some other Patron. For being most skilfull in debate, cunning in the use of wordes, so greatly held in honour, it is little wonder that MERCURIE hath many who. . . . Vide *Homer Od.* I, etc., *Il.* I., etc., *Hymn in Merc.*, *Ovid Fast.* 5., *Virg.* g. I., *Cic. de Nat. D.*, *Paus.* 1. 7. 8., *Hygin. Fab.* 2., *Lactantius*, *Manil*, etc.

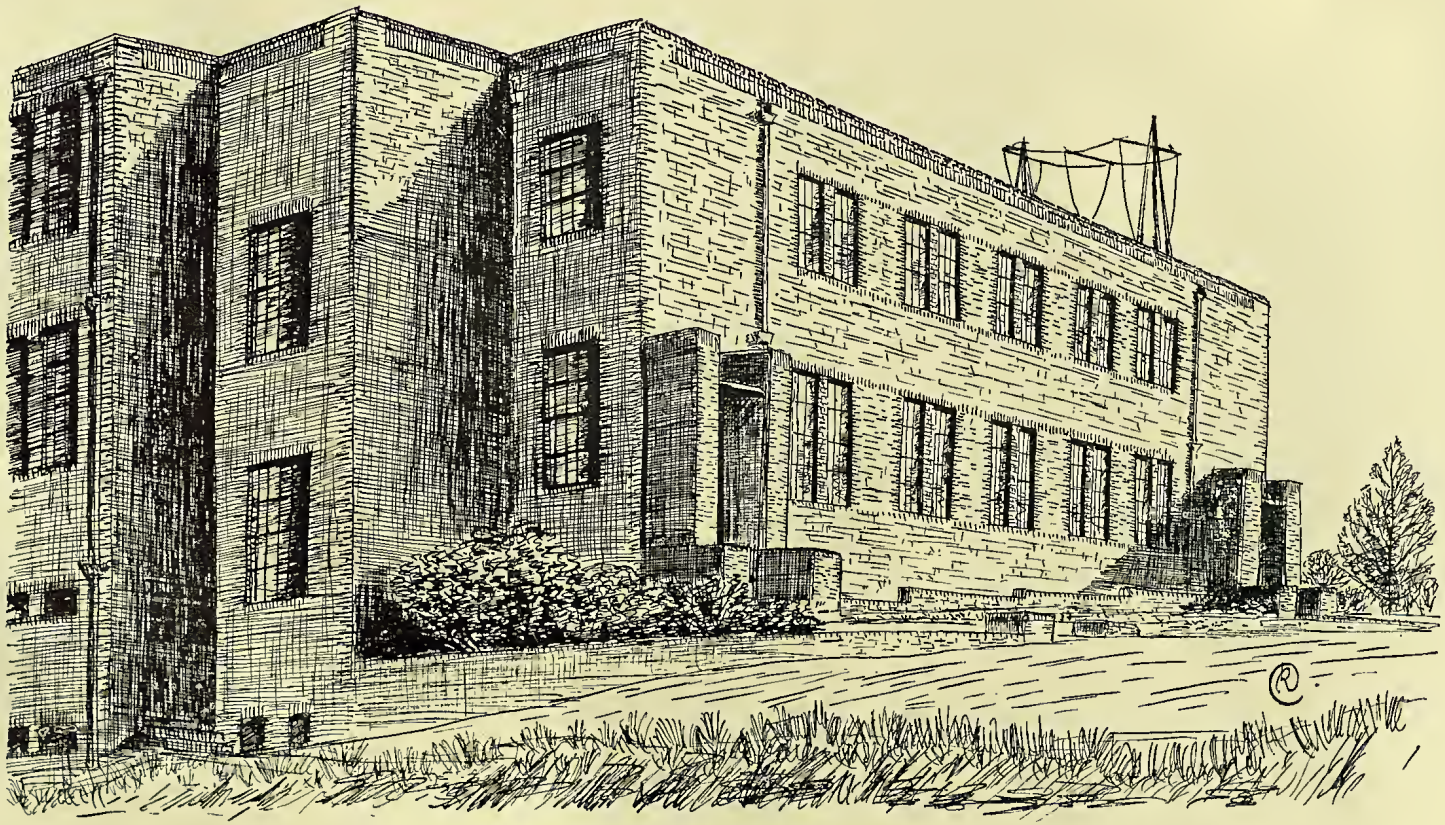
THE NEW PHYSICAL LABORATORY AT UNIVERSITY COLLEGE, SOUTHAMPTON.

NOW that the new physical laboratory is nearly completed and has been in use for two terms, it is possible to give a connected account of it.

The most important requirements of a physical laboratory where teaching and research are to flourish side by side, are mechanical and thermal stability. The research requires great stability, but the moving bodies of students, walking up and down stairs, are liable to upset it. This can be got over by putting the teaching laboratories on the ground floor, but it is also wanted for research and services. These were the prime considerations which guided the choice of the old gravel pit as a site. Here, by scooping away a small amount of earth—little more than mopping-up operations—a site was cleared which allowed the design of a building which would have in effect two ground floors—an upper one with its level in line with the top of the gravel pit, which is the general College ground level, and a lower one at the bottom of the pit. The elevation finally chosen consists of three storeys to the North, and two to the south, since the top storey has been built up on the front only. Thus, seen from the north two storeys are to be seen, the upper ground floor and the first floor appearing above the brow of the pit, the greater part of the lower ground floor being eclipsed by it. From the south can be seen the two ground floors only. The site allows us to have rooms on the north side of the lower ground floor which have the thermal stability of cellars without their disadvantages.

The Architects were Messrs. Gutteridge and Gutteridge of Southampton, and the building was designed in close association with Professor Menzies. Visits were paid to various universities during the design stage, and everywhere helpful advice was freely given, particularly by Prof. R. Whiddington, F.R.S. of Leeds, Prof. A. M. Tyndall, F.R.S. of Bristol, Prof. S. R. Milner, F.R.S. of Sheffield, Prof. S. W. J. Smith, F.R.S. of Birmingham, and Prof. F. A. Newman of Exeter.

The building is steel framed and constructed in brick, and the



THE NEW PHYSICS BUILDING.

From a drawing by Randal Casson.

work was entrusted to Messrs. Jukes and Son of Southampton, whose Foreman was Mr. Smith, and some of the equipment was constructed by the Works Department of the College. The bricks were mainly of two kinds, rough red bricks from Bishops Waltham for external work, and sandlime bricks for internal walls. The facing bricks were of the same large pattern as those used for facing the new library, and the general aspect of the two buildings is similar.

There were two principles which guided the plan; (1) to have an open central court, for access to light and ventilation for the interior of the building, and (2), to put the two lecture theatres together, with a common preparation room. The two lecture theatres are similar in design, with a long lecture bench on the ground, and seats rising in tiers to the back. Owing to this rise, the students' access to the large theatre (which can accommodate 100 students in a comfortable writing position, or 150 at a meeting) is by going down a short flight of stairs (about 4 feet drop) from the upper ground floor level. Another similar drop brings one to the level of the back of the small theatre (which holds 60 writing). A further drop brings one to the lower ground floor level.

The lower ground floor accommodates services and a number of research rooms, in addition to the lecture and preparation rooms. The service section is in the S.E. corner, and this position was chosen to fit in with the direction of the prevailing wind, so that it would take away, from the building, acid fumes formed during the periodical charging of the batteries. On one side of the battery room is the power room, which houses the motor generator for charging the batteries, two smaller motor generators, and a mercury vapour rectifier. The supplies from these machines are fed to two large panels whose function is to allow the services to be distributed to the various rooms at will and without interfering with one another. The panels carry brass strips into which plugs are inserted, cribbage-board fashion; to each room are allotted strips so that two different supplies can be used, and in addition each room has a fixed supply at 200 volts, A.C. The electrical work was carried out under the direction of Mr. P. G. Spary, Senior Lecturer in Electrical Engineering. On the other side of the battery room is the workshop, containing an inner store for materials, and fitted with lathes, mechanical saws, and an electric drill. These three rooms have been put together so that the senior laboratory attendant, who is also

electrician and mechanic, can attend to the care of the electric supplies and to the repair of apparatus with least waste of effort.

On the south side there are two large research rooms, a small workshop for research students, a room for the laboratory work of special students, and a balance room with concrete slabs. The average height is 11 feet, but by digging out and then tanking, one research room has been increased in height to 14 feet so that experiments needing more head-room can be accommodated there. On the north side the rooms are up against the bank of earth for most of their height. There are four rooms here, one is used by special students for optical work, and the rest are research rooms. One is specially arranged for spectroscopic work, with an ante-room in which the light sources are placed. The room which houses the spectrographs is arranged so that it can be kept electrically at a constant temperature.

Access to the upper ground floor is by stairs at each end on the north side, and in the middle of the south side by a lift capable of taking passengers or goods. Since the first floor is only built on the front, the stairs are brought up on one side only, and an extra room is thus obtained on the first floor.

The upper ground floor has an entrance at each end of the north side, and between, in the front, is a long Intermediate laboratory, with two dark bays, and a small room for accoustics. The east side is taken up by an electrical laboratory for advanced students, and behind it is a still larger laboratory for heat, light and sound, with five dark bays. A feature of the electrical laboratory is the arrangement of galvanometers, lamps and scales (designed by Mr. S. Weintroub) which allows the best use of the space. On the south side are lecturers' rooms and the professor's office and research room. The west side is taken up with store rooms.

On the first floor is a small room fitted as a lecture-room for small classes; this room is also used for the Physics Colloquium and other discussion groups. Opposite is a laboratory used mainly for wireless and other technical classes. The main part of the front is occupied by the departmental library in which periodicals and books which are wanted frequently, are housed. There are also two small rooms, one used for research in scientific radio, and one used by Professor Weissenberg. There is access on to the flat roof, and this space is available for extension. The strength of the steels allows another floor to go on over the first floor, and accordingly

two more over the greater part of the building. Should it become necessary later, more room still is available for expansion to the south of the building.

Heating is by radiators of the normal classic type, fed from a boiler housed in the N.E. corner of the building, and this is also capable of heating the chemistry building when erected. This form of heating was preferred because of the convenience of warming or drying apparatus placed on the top of the radiators.

The accoustics of the lecture theatres are excellent; the lecturer can be heard comfortably anywhere in the room if he speaks in a normal conversational tone.

Owing to delay in the delivery of materials the work of erection proceeded more slowly than was anticipated, so that only one month was available during the summer vacation for moving in, instead of the intended period of three months. It was only through the untiring help given me by Mr. S. Weintroub and by Mr. P. W. Jeffery, the Senior Laboratory Attendant, that the building was ready to be used when term began.

The new building will be formally inaugurated by a Lecture, to be given by Sir William Bragg, P.R.S., on the 25th May, 1938.

A. C. MENZIES.

WESSEX UNIVERSITY ART CLUB.

DURING the last week of November, 1937, the first exhibition of the Wessex University Art Club was opened at College by Brigadier E. M. Jack. The Exhibition had a success which was the more encouraging in that it was due to the quality of the work of members of the Club, though there was on view as well, a small but interesting collection of loan items.

The pictures that made the most considerable impression were probably Mr. W. Dring's two portraits, "Rosemary" and "Michael," with their masterly drawing and clean colour, and Brigadier E. M. Jack's landscapes, of which the water-colour study "Chanctonbury Ring," with its beautiful cloud effects, was the most delightful. Mr. R. Casson contributed two oil paintings "Hursley" and "Nursling Mill," distinguished by warm colouring and firm handwork. One of the few exhibitors to use pastel was Professor V. de S. Pinto, whose "Highland Cottages" brought out admirably the decorative possiblities of this neglected medium.

The welcome co-operation of the Southampton School of Art was embodied in several oil paintings contributed by members of the staff, and a number of vigorous water colours by some of the students. College students belonging to the Club showed photographs, with the exception of Miss D. Marshall, who had a number of paintings to her credit; all of Miss Marshall's work gave evidence of a sense of composition resulting in pictures of an unpretentious charm. Some of the photographs—which were nearly all scenic studies—reached a high level both technically and aesthetically, if indeed it is permissible in these days of artistic photography to distinguish between the two sides of camera-work. Invidious though selection may be, Mr. P. G. Wickens' seascapes and Mr. R. H. Dolman's various studies must be mentioned; the latter's "Essay" was original and ingenious—if hardly fair !—in capturing attention with a photograph of a photograph in a magazine displayed with others, in the fashion of a still life, on a cushion.

As a whole the exhibition left a pleasing impression of sincere enthusiasm combined with a generally high level of achievement.

At the Opening of the First Exhibition of the Wessex University Art Club.

Photo by kind permission of Southern Newspapers, Ltd.

True, its range was limited; there was practically no black-and-white work (though some beautiful etchings of the late Colonel J. Withycombe were included in the loan collection), nor were any crafts—such as wood carving, book-binding or pottery—represented. These, it may be hoped, will figure in future exhibitions. However, so far as it went the work shown was amateur in the best sense of the word, the product of a genuine delight in artistic creation, neither advanced nor out of date in outlook and method. If the Club continues as it has begun, its Annual Exhibition will be something very worthy of support.

MARCH.

By Norah K. Turner.

SUN on the water and an eager wind
New made for Spring.
The sky a vast illimitable blue,
And song birds calling from the topmost twigs
Of budding trees pregnant with tight curled leaves.
New life in hedges under the kind sun
And new warmth glowing in the sheltered heart
Of every opening primrose.
Strong shadows fall upon the whitened dust,
Keen spears of flame break open the dark sod,
(Sharp crocus buds revealing hoarded gold
From unremembered summers)
The catkins stream like banners on the breeze
Shaking their pollen down the vibrant air
And higher and still higher leaps the heart,
And brighter and yet brighter burns the sun.
New eagerness to recreate the world,
To do, to make, to live, at last to find
Some fuller outlet for those poignant dreams
That only once a year leap into life
And faint and sicken with the growing year
Fading to dull nostalgia in May
And with high summer quietly laid aside.

THE SCHOLAR'S DAY.

By R. W. Ladborough.

The Argument.

The Muse is invok'd; the Scholars are wak'd by a Bell; after Ablutions they fortify themselves with Ham; sundry morning duties; the business of the Lecture-Room and the Laboratory; the race for Coffee is compar'd by a simile with the Sea; Luncheon not suited to heroick verse; the mighty power of Sport; the ungrateful task of Captains and Secretaries notwithstanding; the delights of Tea; Conversation ensueth on divers Topics; Examination now clamoureth for his due observances; Work at length finish'd, the Scholars partake of another Meal; the Poet admonisheth them; how cometh it that their evening Activities are prolonged; a principalian Decree went forth; the Scholars are now idle until Somnus claimeth them; the Poet alloweth his Muse to depart.

Come, heavenlie Muse; attempt in decorous Song
To hymn the *Students'* multitudinous Throng.
Collegium and its *Refectory*,
All *Tutors* and the dread Directory
Of *Halls, Professors, Wardens, Principal*,—
Powers inviolate, invincible—
Chuse for thy Scrutiny; nor end thy Lay
Until thou hast describ'd the Scholar's Day.

Scarce hath bright *Phoebus* with incipient Light
From *Wessex'* Confines chas'd the drowsie Night,
When horrid Din of most unwelcome Bells
Rudely invades the slumb'ring Scholars' Cells.
A Stir begins; a furtive Door doth ope:
Awak'd they issue with Brush, Sponge and Soap,
Reluctantly in dreamie Evolutions
To simulate perfunctory Ablutions.
Time tarries not; for each it is a Race
To reach the hall before th' accustomed Grace,

To coax on foot a too refract'ry Sock
Before the punctual Crowing of the Cock.
At length the hall is full; with downcast Eyes
Meek *Custos* calls forth Blessings from the Skies.
The hungry Students view the florid Ham,
Sit, and prepare in hastiness to cram
The welcome Fodder, for full well they know
Ere One o'clock, there's many an Hour to go,
Full many an Hour, when not Insides but Mind
From mental travail Nourishment must find.

Speed on, my Muse ; 'tis time to be away.
Only the *Tutor* now in Hall may stay,
But stays not. For as up the Hill they drift,
The tardie ones he succours with a Lift.
The *Sun's* Car also mounting in the Sky
Drags on the busie Morn and can espy
Its diverse Labours amplified; the *College*
Exacts from all a Sacrifice to Knowledge.
Some seek the *Lecturer*, whilst other Men
Commingle Potions in the *Chymist's* Den,
And little reck they that a loathsome Smell
Anticipates the pois'nous Fumes of Hell.
The wise Professor with a brave Discourse
Dumfounds the Scholar, and himself grows hoarse.
But lo ! *Eleven* strikes ; a change is seen,
And happy *Laughter* bursts upon the scene.
As when the Sea, hovering 'twixt the Tides,
Breaks suddenly amid the Rocks and rides
In ecstasy along the welcome Beach,
So doth this rushing Tide *Refect'ry* reach.
What means this Respite ? Why this rest from Toil ?
'Tis *Coffee*, mellowed in an age-long Boil
Refreshment offering. Hail, blessed Bean,
That smooth'st the fev'rish Brow with Juice serene !
At length the Rest is o'er; with Mind less * *
The *Lector* and his wards resume their Studie.

Forbear, my Muse, to hymn collegiate *Luncheon*,

* * The page of the MS. is torn here. Hence the lacuna.

Most worthie Meal, thou swift but greedie Junction
Of Morn and Evening, too high for Prose
Too low for solemn Verse. But who are those
In rude apparel that my sight dismay?
Now sweet Disorder tells the time of Day.
Ah! *Sport*, Britannic Deity, thy Pow'r
Is great! Let modest Learning have its Hour,
And Health robustious and the common Spirit
Of River and of Field it disinherit.
So now the Crews on *Itchen's* Flood grow wise
As Intellect gives way to Exercise;
And who pursues the nimble Football's strife
Learns his own Lessons in the Art of Life.
Harsh *Winter's* Games, whose sweatie Joys consist
In Broils tumultuous none can resist——
Save few; hence *Secretary's* fierce Despair
When *Jones* is sick, and *Jonson* is not there,
And *Jenkins* works, and *Robinson* is late;
Thus the *Eleven's* Sovran curses Fate
And envies the grim Tyrant of the *Eight*.

Anon the round Tea-Pot with gushing Spout
Pours forth its welcome Flood; another Bout
Begins of Day's Activities. Alone
Delightful Tea is potent to atone
For Thirst's onslaughts. Ensues now idle Chatter
On things that do and things that do not matter.
The Scholars their Associates among
Rest their tir'd Limbs but exercise the Tongue;
Some momently their mimic Wars exchange
For foolish Gossip and the curious range
Of academic News. Well do we fear
Rashly such childish Tattle to o'erhear.
Worthier far are they whom Conversation
Upblows to Realms of aery Speculation
In Metaphysic's Wake, and who delight
In Regions infinite.

But hark! Once more doth th' awful Bell intrude
Calling the Scholar's Mind to Bus'ness rude.

E'en as the Traveller in some sylvan Glade,
In rustic Joys exulting, undismay'd
Pursues his gladsome path, but swift recoils
On viewing 'neath the trees the horrid Coils
Of a foul Serpent strewn across his Way:
He fain would pass, but first the Worm must slay,
So now the Coils of foul Examination
Obtrude their presence, vile Contamination
Of Scholar's Joys, that cast across his track
Their Snares most filthie; nor can he turn back
But on must press to Victory or Shame,
To battle with the Foe for Honour's name
And general Renown. And so to Bookes,
Those weapons grim, and Silence must the Nookes
Of Students now be dedicate, until
They summon'd be to yet another Meal.

With busie haste the Banquet now proceeds,
And bustling *Matron* seeth to the Needs
Of *Custos* and his chosen Table high;
But Bickering disturbs the smaller Fry
And Discontent; nor should they, if the Food
By some disdained be, forget the Good.
For many a Meal were worse, but never yet
Was found a better Place to grumble at.
When *Stators* pass the Sinuous Steak along
For Scholars to consume, t'were wholly wrong
To murmur "Possum sed non placet," as
The Rule is "Intus fervet Caritas."

Next sing, my Muse, the changed Times, and tell
Of what in endless Conclave once befell,
And how there issued thence a high Decree
Proclaimed thus by *Princeps'* Majesty.
"Ye Sons of Wessex, mark my Words. Attention!
Things new are come, Things old are in suspension.
No longer shall your Hostel be a Pen
Where congregates the Flock at stroke of Ten.
Now wishing your Complaints with Joy to leaven,
We give you Leave to be in by Eleven."

He said; and *Hartley's* Brood dumbfounded heard
With grateful Ear the principalian Word.
So now the filmie Cinematograph
Opes wide its welcome Doors for some to laugh
And some to weep; now Mirth and Jollity
Do mock erstwhile begowned Gravity.
Some are there who in shameful Disarray
Disgrace the placid academic Day
With Dances rude and barbarous; some who
Much Pleasure find—O would it were not true !——
In utt'ring their political Displeasure.
Ah, well ! To each man his own Use of Leisure.

Meanwhile the Night draws on, and soon the Clock
Summons the *Porter* fierce to turn the Lock.
And woe to him who makes his Entrie late:
He must perforce his Follies compensate.
Now Silence is the Law; to disobey
Means Tutor's Wrath, and two Shillinges to pay.
But soon all Din is over, all is still;
And *Somnus* on tir'd eyelids sets his Seal.
The Scholars to their Dreams their Cares consign.
Farewell, my Muse, thy Absence-form I'll sign.

This poem is reprinted by kind permission of the Editor of the *West Saxon*.

THE SWARM.

(The following story is by a student attending one of the Evening Classes at University College.)

SUSAN LAVER was busy clearing off the dinner things, and her farmer husband was cooling with a smoke, when there was a commotion among the chicken, and the dog barked a warning that someone was coming near the house. There was a scraping in the porch and a gentle tap, and thinking it was one of the neighbour's children come for extra milk, she hurriedly wiped some of the wet off her arms and went to the door. When she saw the tall slender young girl standing there smiling, in a crisp white linen suit, Mrs. Laver went pink with surprise and pleasure and put up her hand to the stray wisps of back hair that had fallen on her neck.

"Hullo, Aunt Sue, are you very surprised?"

"Well I never! come in my dear. Have you had your dinner? John! here's our Ellen come to see us at last."

He was already on his feet to welcome this fair visitor, who had been a child the last time he had seen her, and was now a young woman, and a good-looking one at that.

Uncle John gave her a resounding kiss and was full of praise and astonishment at her maturity. He made the little jokes and kindly criticism that elderly uncles feel is their privilege.

Many years ago, after weeks in bed with pneumonia, Ellen had stayed at this pleasant farmhouse for a long period of convalescence. As she sank willingly into the armchair John had left, happy memories crowded into her mind now of a small room upstairs with a low ceiling, a bed with a white honeycomb bedspread, and a window that looked away over the tops of trees.

It was a long time now since she had visited the farm, for working in a hairdressing saloon in the town, and with new interests and many friends, she had not had the inclination to see the quiet farming people. Until, on this particularly hot Wednesday, she had felt tired and miserable, and knowing that her girl friends would not be able to help her in this mood, and that the boy with whom she was having a gay flirtation might be frightened away, she had looked elsewhere for sympathy. She wanted a change, because

she was beginning to hate the smell of wet hair and scented shampoos, and the atmosphere of the hot and steamy cubicles made her feel limp and tired.

While they eagerly plied her with questions about herself and her work and the others at home, all the time eyeing her with wonder, Ellen took out her cigarettes and lit one. As she pinched out the flame of the match, her fingernails caught the eye, because they were varnished with bright crimson.

The sight of them made Mrs. Laver wince, and she felt sorry too for the pale-coloured hair, which she knew was its natural colour; but once it had tossed around her face in loose tantalising curls, and these were now bunched up and imprisoned, rigidly and fashionably held in the nape of her neck. Her lips, mused Mrs. Laver, were the colour of the geums in the border.

Ellen was aware of the scrutiny of their solemn eyes and her chin stuck out a little defiantly; she flicked the ash from her cigarette fiercely with her gaudy fingers.

Under the thatched roof which kept the farmhouse cool even on these hot days, she soon became refreshed. The small windows allowed only a dim and peaceful light to enter, and her eyes went to restful places in the room where well-known objects remained always the same. On the window sill were branches of green leaves in a vase. Aunt Sue was not a born country woman, and she had a love and appreciation of Nature which the real country born more often takes for granted. Although she was a good housekeeper and mother, and had soothing hands for animals and green fingers for growing things, yet in many things she was not a practical farmer's wife. She liked to see in the corn the weeds that he detested, and she hated every killing that he found necessary. In her heart she was with the wild, she was with the exploding poppy capsules and the winged seeds that planed down into his rich brown earth ranked with cabbage and turnip. She went more often from the kitchen and the farmyard than any other wife around, but her stocked shelves proved that she did not merely idle in the fields.

"I thought of going down to pick some wild strawberries this afternoon. John tells me they're bearing well this year. I'd like to have a pound to mix with a couple of the others to make jam. I think the wild ones give it a sharp tang. Perhaps you would like to come down, it's not very far?"

"Ellen knows where 'tis," said John smiling in a knowing way.

"I can remember picking some," replied Ellen, "but I can't remember where it was."

"What, when it's old Alan Sawyer's largest field, now you ought to remember, you and young Ben used to be sweethearts in the old days, didn't ye? "

"Did we? " laughed Ellen, and blushed faintly.

Of course, she remembered the fun they all had together. Ben and his sister Daisy and Tom the little brother. She recalled a hot afternoon, one very much like this, when the boys had bathed in the stream that ran between a field and the woods, and then they had galloped round the field afterwards, brown and shining with wet, to dry in the sun.

Another day, too, when they had been playing in the sandpit up in the woods where all the heather was in bloom, wallowing in sand with their shoes and stockings off, making caves in the pit walls. They were having the greatest fun when suddenly a bellowing voice sounded above them and there stood an irate keeper, shaking a stick at them. They had picked up their shoes and ran, and she would never forget the path they had to take, because there were along it several large ant-hills, and the ants were streaming industrially across the path. Ugh! it had been horrible to run over them with bare feet.

"Yes, I do remember," she said, "I should love to come, it's not very far."

She drew herself rather reluctantly from her cool place in the armchair and followed Aunt Sue into the glaring hot afternoon. They went down a path between a hedge and a cornfield and the sun beat down so hotly that Aunt Sue pulled down some bracken along the hedge and showed Ellen how to hold it to shield the back of her neck.

Out of the sun they went into the cool shadows of a copse, where the path ran steeply down over the roots of trees, to damp spots green with moss, pitted by the hoofs of cattle and the ruts of a cart. Aunt Sue picked her way easily over the wet places; she knew by the colour of the moss and grass, where the ground was driest. Ellen following behind tried to imitate her footing and, like her, to catch on to overhead branches to keep steady, but she felt uncertain and her high-heeled shoes kept sticking into the mud. Aunt Sue saw a crab-apple tree that would be heavy with fruit later on, but Ellen only saw the ugly stains on her new stockings.

There was a loud buzzing of flies and a cloud of them danced all the time over their heads, until they came to the open field again and then they dispersed and went back into the humid scented shadows.

They crossed over the field into the shade of ragged hawthorn bushes which together with a barbed-wire fence and a stream on the other side, separated this field from another. The hedge of hawthorn dwindled down to smaller bushes and then to straggling brambles and a riotous hedge of flowers. Hemlock flourished with thick stems and huge heads, purple knapweed, yarrow of the thousand leaves, hedge parsley, great plants of meadowsweet, with the tufted vetch climbing up by their help to get a place in the sun. The stream itself was covered with blue brook-lime and forgetmenot, and fool's watercress. They walked along by this hedge until they came to a break in the barbed-wire fence, where the top line of wire was down and it was easy enough to straddle over.

Ellen's face screwed up with anxiety as she tried to save her skirt, but the wire caught maliciously at her celanese petticoat and jagged it.

Aunt Sue was on in front amid brambles, low bushes, and long grasses and struggling vetches, so Ellen unhooked herself as best she could. This was the lowest part of Alan Sawyer's field. They were climbing up the side of it, and the humping middle of it curved on the horizon like the top of the world.

Amid the tangle of plants, Ellen felt as though she was in a jungle—the ground was spongy under her feet, there was no path, and she did not know which way Aunt Sue had gone. So she just took the way that looked clearest. She had not gone many steps when her startled eyes saw an ugly yellowish coiled heap within a yard of her feet, and out of it a poised head with black beady eyes. She stopped quite still when she realised it was a snake, and was scared to move. When she did it was backwards. Then in a stifled panic she turned and went recklessly through the rank growing plants with a feeling of loathing dread.

"Aunt Sue, I saw a snake, oh, such a big one ! "

"Oh, that was only a grass snake, they keep by the stream to catch voles and frogs. They're quite harmless," she smiled. "Didn't it run away ? "

"N-no, it just looked at me. I thought it would bite."

"They usually can't move away quick enough, I expect it was half asleep in the sun."

Ellen was relieved when they got up to the clear surface of the field, where there was a slight breeze. She sat down in a heap on the grass and lit a cigarette. With a fan shaped bunch of bracken she was able to shield her face and neck, and she liked the cool touch of it on her skin. The sun and more fresh air than she had breathed for months made her feel drowsy and almost contentedly she looked through the forest of grasses as she leaned near the ground, and aimlessly watched the gaudy winged flies that shivered the green branches—the striped flies with waspish waists and ominous tails, insects like scuttling chips of brass that were sun beetles and tiny hoppers that found themselves on the plateau of her outstretched hand.

Aunt Sue sat down near her and started to pick the wild strawberries. The grass was thick with the little bright fruit, four or five on a stalk, tempting and sweet smelling, wee bitter-sweet fruit, seeming fit only for fairies or to smear the lips and stain the fingers of children. Yet Aunt Sue's patient finger would pick and pick, gently and determinedly, until she had the pound in her basket. Her simple mind enjoying the daintiness of the fruit, the bright red beauties in the green grass, the search for larger ones in the longer grass and in the shade of bramble bushes. They did not merely grow in this patch, but spread everywhere all over the back of the field, and she moved away from Ellen until she was by herself, silent and smiling and utterly content.

From where she was, Mrs. Laver looked back at Ellen and wondered about her. She knew that her niece did not find it interesting or worth while to pick these little wild strawberries. The small perfection of them had no fascination for her, and she was not young enough to grasp greedily at the free gifts of the field. Mrs. Laver suddenly felt very young and foolish, like a child that is surprised at play by an unsympathetic grown-up.

She came back to Ellen when her basket felt heavy enough. The girl had picked a bunch of the fruit and was nibbling at them, and looking hot and bored.

"I saw Ben over in his garden. Did you know that he's taken up market gardening and he seems to be getting on very well; he's got several greenhouses up there now. Why don't you run over and see him, he would be ever so pleased to see you—he often asks

after you. I'll go on down to the stream, I want to get some flowers down there."

Ellen's eyes brightened a little and she sat up.

"Shall I?"

"Yes, go on. He'll think it unfriendly if he knows you are here and never a word to him. Look, if you stand up you can see him from here."

Ellen stood up and could see a brown figure among long rows of plants. "Fancy having to work in this heat!" she murmured.

"If you go to the lefthand corner there's a way into the next field."

"All right. But I don't expect he'll remember me."

There were cows in the first field and she didn't like the way they stared, but it was quite a clean sort of field to walk in with no jungle places. The grass was eaten off smooth, and the tattered ragworts stood alone covered all over with the striped caterpillars of the cinnebar moth.

Ben was working near the fence and he stopped the rhythmic movements of the hoe and leant on his tool, one hand shading his eyes as he saw Ellen coming. He watched rather apprehensively the approach of this swaying slender figure of a young girl he vaguely recognised. He was dirty and dripping with sweat, and she looked very cool and smart.

"Hullo Ben!"

"Oh, hullo! Ellen isn't it? I thought it was you."

"I didn't think you would know me, but Aunt Sue said you would."

"Why yes, I remember—but you have grown up." He came to the fence and leaned his hands on the wire looking at her, and he was so big and brown and different from the boy she had known.

Mechanically their lips made halting polite remarks, as they spoke in turn about her work and his venture, while he all the time looked at her as though he had never seen her before, and she gazed coolly and indifferently at this stranger. It was as though four people had met and two of them did not know each other and were not introduced.

The two who were friends laughed a little about old times and stood some time remembering while the cows glared at them solemnly, chewing the cud. Then they wished each other luck and said

good-bye, while the strangers looked hard at each other and never said a word.

Ben turned back to his hoeing and went at it with such savagery and abandon that he cut off some young shoots.

Ellen walked slowly back the way she had come, feeling hotter than ever. As she went she kicked viciously at a solitary head of ragwort and the contented cinnebar caterpillars. She did not look back, or she would have seen Ben looking after her. Her lower lip was stuck out petulantly and as she went into the big field she deliberately set her foot on some of the choicest berries she had yet seen.

But as though Nature disapproved of such carelessness and indifference, suddenly without any warning Ellen suddenly found herself the centre of a great swarm of emmets that covered her head and shoulders in a cloud. They burred in her ears and dashed into her eyes almost blinding her, and they stung. Like a pony that has been pricked by a detested gad-fly, she gave a cry of fright and started to run, the whole swarm moving with her. They clung to her hair and got down her neck—she felt suffocated by them.

She beat frantically at the air as she ran but they were all over her, crawling on her face and neck and entangled in her hair. She only stopped running when a strong hand caught her from behind.

"Hey, Whoa! Wait a minute, let me help!"

It was Ben. Ellen almost sobbed with relief as his large capable hands swept the horrible flies off her and beat them away.

"Come on, now run, up to the top—we'll be free of them there!"

He took her hand and they ran up to where the field humped its back in the middle.

"Now, let's see. That's better—you're nearly free of them now."

Ellen shook her hair where she felt some insects still burring. Ben had some too and he wiped them off his shoulders and picked them off his neck. With his great hands he shook her hair as gently as he could until it was a loose tangled mop. She turned a flushed and pitiful face up to him.

"Why did they pick on me," she wailed: "Oh—oh! they're still stinging me all over—they've got down my neck, whatever shall I do?"

"Can't you just take off that jacket thing a minute?"

Ellen did not protest but let him help her off with the linen

top of her suit, which he turned round to shake very hard, while she picked out the imprisoned insects from within her vest. Little pink spots glowed all over her shoulders.

"You must paint them with iodine," advised Ben as the jacket went on again minus the insects.

"Thanks so much. That's much more comfortable."

Ellen pushed back her tousled hair from her flushed and worried face, there were almost tears in her eyes. Ben put his arm round her shoulders reassuringly and went with her to join Aunt Sue, who had quite a shock when she saw Ellen looking so ruffled.

"It was such a swarm as I had never seen before," explained Ben. "Poor Ellen was black with them."

Aunt Sue noticed how that protective arm strayed about Ellen, and how he held back the brambles and helped her across the stream, and she saw Ellen's new smile. So she asked Ben up to the farm to tea.

When Ellen got home that night, with her arms full of flowers, they asked her how she had found the country.

"It was lovely," smiled Ellen, "I am going out to see Aunt Sue again on Sunday."

DOROTHY BLAKE.

AN EEL TRAP MAKER OF THE NEW FOREST.

IN our delightful north-western corner of Hampshire, the "grand old man" of the village still plies his spare time trade of eel-pot making, for at the age of ninety he still likes to keep his hand in. As a lad he picked up the art from his father who supplied many farms on the local water meadows with these traps and also sent annual supplies to more distant counties. There is still a certain amount of demand for them, but when this old fellow has finished his earthly toil one wonders if any of the younger generation would have patience to create these elegant little cages.

The finished pots measure about three feet long and require care and skill from the outset. Selected hazel rods, in the right condition as regards sap, have to be gathered and split into slender strands and woven carefully into the correct shape, leaving at one end an entrance with a clever device which allow the eels to enter the pot with no chance of escape. A system of "one way" traffic only! Up to two or three pounds weight can be caught at a time when this sort of eel pot is used in Spring and Summer for trapping the smaller type of eel during these seasons. The larger sea-going eels are trapped by the hundred-weight in the Autumn by a different method.

The maker delights to explain the details of his work, although it takes a practised ear not to miss a word of his broad Hampshire dialect. His workshop is a galvanised iron shed, open at one side, and occasionally the family is wont to hear resounding bangs and crashes from within. These are expressions of feeling—some detail has gone wrong or he has unfortunately broken a necessary rod.

His well worn-out clothes are a pleasure to him and he thinks he looks more handsome in rags. He recently created a garment out of a sack, suitable for the job he had to do. His family expressed their disapproval, which so upset the old man that he refused to come into the homestead for his dinner. Incidentally the garment did not allow for much movement, so perhaps also he found progression impossible! One of his delights is to tell of his bygone days, when he used to rise at three or four a.m. and walk several miles to the

farm to follow the plough, work on the meadows or hoe the roots, and hay and harvest time which involved extra long hard hours for a small wage. Even then he used to make his eel pots on and off throughout the Spring. His best effort in one day was five—two made before going to work, one in his dinner hour and two at night.

He talks cheerfully of those strenuous days and his face is a picture of smiling contentment. A twinkle comes into his eye at the mention of the young folks of to-day, and their easy hours. He does not envy them, he says. His whole life has been spent in close contact with the land and he is always eager to make his slow way down to a farm gate to discuss the crops and the weather with a local farmer.

"We caan't bide een dooors (indoors), the rhe'matics do get at ee somethin' tara'ble," or "Ee must be oot a potterin' aboot, there's al-ays summat to do. Thic birrds do terrify the currant trees summat awful and ee likes to get oot a bit just to kip 'em aw'ye."

He unconsciously carries out his Physical Fitness Campaign by leading his only cow to one little pasture or another in winter, and in summer making a "bit of hye." When the grass is mown by his son, he will support himself on a stout stick and patiently lift and turn the hay with another. He even spends many hours carrying it in bundles under his arm up to the cow-shed. Only imminent rain will induce him to allow the family to assist. In October, if the weather is favourable, he occupies himself by cutting and carrying sackfuls of dry fern (bracken) from the forest near by, and in this way he can store almost sufficient bedding for his cow during the winter months.

He still thinks that no one can do things quite as well as himself and no doubt he thinks he could catch many more eels than the drowners[1] do, if only he were able to go and set his own traps.

KATHLEEN M. TAZEWELL.

[1] Water meadow workers who dig and clear the "drawns" or ditches which irrigate the land adjoining the river.

THE EELTRAP MAKER.

Photos by the author.

PHILOSOPHIC BALLAD.

By V. de Sola Pinto.

I see the Frenchman stand,
  gay, debonair, erect:
Descartes has drawn the sword
  of abstract intellect.

The blade sweeps thro' the air:
  matter is cleft from mind;
spirit's a thin grey ghost;
  dead matter's left behind.

Now comes stout English Hobbes,
  and with strong hammer splits
The hard unwieldy mass
  into small lifeless bits.

Gaily the atoms fly:
  Hobbes is a naughty boy,
pelts priests and solemn men,
  and shouts aloud for joy.

Apollo and the Muse,
  fair Venus and her child,
The leader of Heaven's host,
  the Virgin mother mild

fade into common air:
  men are left with the cold,
hard atoms which they seize,
  and force into the mould

of their dark passions. Steel
  ships float on steely sea;
huge birds of metal roar
  over the misery

of streets where hopeless eyes
  gaze at the hoardings' glare ;
girls ride in dirty trams,
  and listless children stare.

Bring back your sword, Descartes,
  Hobbes, your strong hammer too,
we serve a harsher lord
  than any whom you knew :

the Anti-Self that broods
  like a thick pall of brown
fog over wintry fields
  and sullen dingy town.

SPRING.

By W. Walter Gill.

O WHEN the wind blows down the glen in Springtime
Stark as the brass-blare of a herald's trumpet
Harrowing the half-leaved woods from ridge to river:

O when the river comes cataracting headlong
Cream-froth'd and umber round its grey rock-islets
Between tall glensides seamed with thready silver :

Older than thought, older than human passion,
A forgotten kinship wakens beneath the memory,
Stirring that high-heaped ossuary of a lifetime :

The elemental substance of those shadows
The hills, the woods, the seaward-pouring waters—
In Earth, in us, one Sun-implanted essence—

Quickens again in each, and breaks in beauty
Like a long-smothered spark under thick ashes,
Like a close-prisoned seed under dense mould !

GEORGE THOMAS, MASTER R.N.

SOME years ago University College, Southampton, was presented with an unusual manuscript "The Private Journal of William Mogg." The Journal consists of six closely handwritten volumes, of which Volume II and III are of particular interest as they describe Mogg's experiences as clerk on two early Arctic Expeditions under the command of Captain (Sir W. E.) Parry in 1821 and 1823; and as purser for several months of H.M.S. *Beagle*, which with H.M.S. *Adventure* was making the classic survey (1826-1836) of the coasts of South America. Volumes IV, V, and VI contain detailed accounts of a number of excursions that Mogg undertook, often on foot, in England, France, Germany and Italy, between the years 1831 and 1868.

The First Volume of the Journal covers a period from 1811-1821, during which Mogg served in various vessels, whose chief occupation was either cutting out in the Mediterranean or blockading the coasts of France. In 1817 Mogg was appointed "clerk in charge of stores and commissary department" to H.M. Brig *Investigator*, and for four years he was brought into close association with CAPTAIN GEORGE THOMAS, commander of one of the smallest vessels in His Majesty's Service. In an appendix to Volume I of the Journal, Mogg collected details of the extraordinary career of Captain Thomas. His account is substantially correct, as there is much supplementary evidence by which the facts that he records may be verified.

"George Thomas, born in London, an orphan, was in early life placed, by some unknown friend in the Blue Coat School, where he appeared to have received a liberal education, with the last 12 months in the mathematical class. Having finished his term he was apprenticed to a London shipowner, whose vessel was in the South Sea Whale trade."

Two entries appear in the Register of Christ's Hospital[1] relating to the admission and discharge of George Thomas:

11 June, 1789. George Thomas, son of William Thomas, born 26th February, 1781 . . . admitted from Saint Saviour, Southwark, Surrey.

[1] In a letter from the Bursar of Christ's Hospital School.

2 June, 1796. George Thomas is this day discharged from this Hospital for ever by Welham Clarke, Commander of the Ship Commerce, burthen 300 tons, in the Southern Whale Fishery; with whom he is to serve seven years, unless His Majesty should require his last year's service.

Within eighteen months of leaving England, the vessel was wrecked in the Pacific. The captain and crew were saved by an American merchant bound for China, but through lack of water this vessel was obliged to make for the uninhabited island of Mas-a-Fuera in the south-east Pacific Ocean.

"A sheltered spot for landing was found, together with a convenient stream of limpid water, which with hoses supplied and filled the casks in the boats. As a matter of course the crew of the wrecked whaler were also engaged, and Thomas with his shipmate and companion, San Domingo Jack, a black boy about six months his junior, had visions of a Robinson Crusoe life to which they foolishly gave expression. The American captain was in the boat with them . . . and took them at their word . . . and landed them with half a barrel of salt beef; half a barrel of pork; half a barrel of biscuit or flour; three guns and some ammunition."

For a short time the two boys made themselves tolerably comfortable, but after ten months San Domingo Jack met with a fatal accident in attempting to recover a goat which he shot, but which had fallen over a cliff. Thomas, who was now left alone, proceeded to collect and to preserve skins of seals which were found in great abundance and could be easily caught, and he continued his solitary lordship over the island for a further three years when another vessel short of water put in at the island.

"As they knew the island to be uninhabited, the crew were astonished to discover, what at first sight appeared to them, a savage approaching armed with a spear on his shoulder. They took the precaution of loading their muskets with ball in the event of being surprised by the appearance of other natives. Thomas, who was of low stature and dressed in the skins of goats, seeing the dangerous position in which he was placed, threw down his gun, extended his arms over his head in a vertical position. . . . After close interrogation by the captain, Thomas was asked if he had any means to pay for a passage from the Island, to which he replied that during his residence at Mas-a-Fuera he had secured, in a good state of preservation, about 5,000 seal skins. The mode of computation was by a given number daily skinned and the lunar phases. Having ascertained the quantity of the skins at the depot, the captain offered him a passage in his cabin for China for a half share of the pelts, which the poor isolated youth was only too glad to accept. Thomas' portion realised £2,500, a part in cash and bills on good houses in England. He then said he did not covet the king to be his uncle.

Without loss of time . . . he secured a first class passenger's berth on board a

large ship bound to England . . . but on reaching the Chops of the English Channel the vessel was boarded by a press gang . . . and the young Crusoe Mandarin was carried away like a felon to be detained on board the Frigate and ordered to do duty before the mast. The morning following, the Master-at-Arms was occupied docking his long togs, i.e. cutting off the tails of his coat.

About ten months after this degrading ceremony the ship received orders to blockade the coast of Holland, where they were employed some time. Here Thomas got into a serious scrape by taking up a sextant and applying it to his eye to ascertain if the sun had reached the meridian. The young Midshipman to whom the instrument belonged, seeing the liberty thus taken, struck him with the fist, and when Thomas innocently asked why he was struck, this young sprig—probably a scion of some noble house—reported our youth to the First Lieutenant who immediately ordered him to be taken below and placed in irons."

The captain, hearing of the occurrence, was surprised to find that Thomas should have received an education so liberal as to enable him to use nautical instruments, and began to question him. The captain himself was an old Christ's Hospital boy and finding that Thomas was a schoolfellow, he placed him on the quarter deck with the rating of schoolmaster; a training that proved most valuable for Thomas' later work, as he was enabled to exercise his pupils in nautical surveying and in the making of field books and registers of daily observations.

This continued for about a year when war broke out again on the continent and preparations were made for a large army under command of the Duke of York to collaborate with a fleet to be conducted up the Scheldt, to Walcheren, under command of the Duke of Clarence, who was Lord High Admiral. Mogg now affirms that the expedition of the fleet up the Scheldt was delayed for lack of a pilot, but that after several months Thomas was chosen to fulfil the office; moreover, not only was he successful in conducting the fleet up and back again, but that he received as a reward an appointment as "nautical surveyor, at 20/- per diem, a further proof of the high estimation his services were held by his superiors."

It is a fact that Thomas was appointed to the *Investigator* in 1810 as in "Memoirs of Hydrography"[1] the following account appears of "George Thomas, Master R.N."

"This officer succeeded the civilian marine surveyor, Mr. Graeme Spence, on the home coasts in 1810, having been appointed in that year to the command of

[1] In a letter from Vice-Admiral Douglas to Col. R. E. Cooke, Librarian, Ordnance Survey, Southampton.

H.M. Brig *Investigator* without any naval assistant. The first survey accredited to him we believe to be that of Croque Harbour in Newfoundland, dated 1808, on the 12th November of which year he was made a Master."

There is also some evidence that Thomas piloted the Duke of Clarence in H.M.S. *Pioneer* up the Scheldt, though it seems more likely to have been in the year 1814 than in 1809. In "Abstract of Pilotage to Expedition to Scheldt between August 11th—December 23rd, 1809" there is no mention of George Thomas, although there is a complete list of pilots and of vessels to which they were attached.[1] There is, however, a record in the log of the *Investigator*[2] that the Duke of Clarence, H.M. Schooner *Pioneer*, required the services of a pilot to take him to the Roompot in January, 1814. The *Investigator* was in the Scheldt from December 20th, 1813, until the end of May, 1814, and Thomas did pilot the Duke on that occasion.

The *Investigator* was a brig of 150 tons and had been built at Plymouth in 1805. It had been little used till Thomas took command in 1810, but after that date it was continuously employed until 1836 as a surveying vessel on the home coasts, especially the east coast and in Scotland.

Not many months after Mogg was appointed to the Investigator, Captain Thomas and his small Brig took part in one of the most interesting events in the history of the Ordnance Survey when proposals were made to link together the English, French and Spanish Primary Triangulations. The English Primary Triangulation was being extended to the Shetlands, and an attempt was to be made to co-operate with France in measuring an arc of meridian. The survey was to be carried out by Colonel Sir Howard Elphinstone, Captain Colby, Dr. Gregory (professor of Mathematics to the Royal Military Academy), the eminent French astronomer M. Biot and M. Arago another French geodesist. This party was to be conducted to the Shetlands in the *Investigator*. Colonel Mudge, who succeeded General Roy as Master General of the Ordnance Survey, was unable to go on the expedition, and his son Captain Richard Mudge was selected to fill his place.

The French and English geodesists were particularly desirous of comparing, by bringing into direct comparison with each other,

[1] Public Record Office, Ad. 30/36.

[2] Public Record Office, Ad. 51/2474

the Ramsden zenith sector,[1] the favourite English instrument of the time, and the repeating circle of Borda, which was used in the French surveys. The other instruments consisted of a pendulum apparatus, a repeating circle of Fortin, an astronomical clock and chronometers by Breguel. This equipment occupied the whole of the upper deck of the Investigator.

The Shetlands were chosen as a suitable place for these observations, as not only was the English Triangulation being extended as far north as possible, but it was hoped that on the islands there would be established a terminal station, somewhat nearer to the French arc of meridian whose southern terminal was at Formentara. It was therefore suggested by the French Institute and Bureau of Longitude that the pendulum apparatus which had been used in the Spanish and French Surveys should also be applied to similar trials at the principal stations of the English arc.

Within a few days of the party arriving at the Shetlands a most remarkable and regrettable estrangement developed between the French and English geodesists, which ended in the failure of the whole expedition. The cause of the estrangement is still unknown; some have thought that it resulted from jealousy on the part of the French geodesists; others have attributed it to the presence of Dr. Gregory, a man of warm religious feelings, who found it naturally difficult to enter into cordial intercourse with M. Biot, an acknowledged atheist philosopher. Moreover, the cramping of such a mixed party on so small a brig as the *Investigator* was perhaps unfortunate. For reasons, still not adequately explained, the English instruments were erected on the island of Balta, and the French instruments on the island of Unst, with the result that instead of establishing a direct comparison of observations at one station, which could have been made perfect by a unity of both time and place, the French instruments were used at one place and the English instruments at another.

[1] The Zenith Sector, the chief English instrument, was a remarkable instrument and had been constructed by Ramsden for the Royal Society. It consisted of an arc of about 15 inches, with a radius of 8 inches, divided into spaces of 5′ each by dots on the heads of gold pins and having a micrometrical division by which quantities of about 1/10th′ could be judged. The focal length of the telescope was 8 feet; the diameter of the object glass 4 inches; and stars of the third magnitude could be seen during daylight. The instrument was read by means of a plumbline; and the apparatus for placing it truly vertical, for reversing its position and for bringing the plumbline over the centre of the instrument were almost perfect. It was, however, large and difficult to transport from place to place; it needed a waggon and a fairly large staff. Ramsden made a second somewhat similar instrument: one of these instruments is now housed at the Royal Society, the other is in the Library of the Ordnance Survey Office, Southampton.

A year later the *Investigator* took the zenith sector and other equipment to Dunkirk where another sadly unsuccessful attempt was made to co-ordinate the French and English Surveys.

After the work at Dunkirk was completed the *Investigator* returned to the usual routine of the coast survey, and continued to be employed under Captain Thomas on the east coast of England, as well as on the Dutch Coast, and among the Shetlands until 1836, or for a period of 26 years.

"For a short space of time in 1837 Thomas appears to have been without a vessel under his command, the *Investigator* no doubt being worn out. At the latter end of that year, however, he was in command of the *Mastiff*, which vessel had returned from surveying services in the Mediterranean, employed among the Orkney Islands.

George Thomas died in autumn 1846. Thirty-six years of his life were devoted to the surveying service, very often with but slight assistance. His surveys had ever the impress of accuracy and care."[1]

L. E. TAVENER.

[1] Memoirs of Hydrography.

TITICACA.

IN March last year an expedition was sent out by the Percy Sladen Trustees to investigate Lake Titicaca in the Bolivian and Peruvian Andes. Like all scientific expeditions the party consisted of a team, each member qualified to investigate particular aspects of the lake and the surrounding areas of fresh water. The leader of the expedition, H. C. Gilson, together with P. F. Holmes and D. M. Hall, were concerned with the physical and chemical problems. T. Tutin was the botanist, G. I. Crawford (2nd in command) H. E. Hinton and the writer were responsible for the biological side of the work. The business of the expedition was to collect every available fact concerning the fresh waters of this area which are very inadequately known, despite two previous expeditions in 1904 and 1876.

Titicaca is a lake 12,500ft. above sea level, 120 miles long, 30-40 miles in width, with a greatest depth between 900-1,000ft. The lake lies partly in southern Peru and partly in northern Bolivia, and is drained at the southern end by the river Desaguadero which flows into Lake Poopo. There is no outlet from Lake Poopo, and surplus water is lost by evaporation. Both these lakes lie in what is known as the Altiplano, a trough of undulating country, where the crest of the Andes has sagged under the stress of being heaved by the groaning earth nearly three miles into the sky. To the west of the lake are the broken crests and craters of the western Cordillera, 17,000-18,000 feet high, just within reach of the permanent snow, while to the east lies the main rampart of the Andes, the eastern Cordillera, 19,000-20,000 feet high. These mountains reach the line of permanent snow, and their glaciers and snowfields form a magnificent background to the low foothills along the eastern shore of the lake. The drainage of the Altiplano is self-contained and there is no communication with either the Atlantic or Pacific drainage systems.

Railways have been built up to the lake from the coast, and the steamers on the lake run in connection with the trains. Travellers for the lake can either disembark at Mollendo, and take the train up to Arequipa and over the 14,000 foot pass of Crucero Alto to

Puno the northern port of the lake. Or they may, on the other hand, go on down the coast to Arica or Antofagasta and come by train to La Paz the capital of Bolivia, at a height of 10,000 feet, and so to Guaqui the southern port of the lake.

The country round Titicaca is beautiful only under certain conditions. Between the lake and the high mountains on each side is 20-30 miles of hilly, treeless country covered with a wiry grass, a few cacti and some nondescript shrubs. The shores of the lake are steep, but here and there a river forms an area of flat land. The wet season, which starts at the end of November, finishes at the end of March, and after this the only rain that falls is from an occasional thunderstorm. The land gradually drys, withers and is plagued by dust devils, the scenery being dominated by dusty hills and a blue lake. There is no sense of distance and mountains forty miles away seem a mere three or four. Only when this hard landscape is softened by the shadows of sunrise or twilight, does beauty enter in.

But even here the scenery can be incomparable. For example, the transformation of the distant snow peaks of the eastern Cordillera from a rosy glow to a still steel-grey as cold as death itself, and devoid of mercy. Or again the 90 miles of unbroken snow ranges between 19,000-20,000 feet in height seen over the blue waters of the lake, from the sandy coves of the island of the Sun. Sunset and sunrise wrought changes on these mountains which surpassed description.

The climate as judged by European standards is not extreme, and life on the Altiplano is like living in a draughty room. Out of the breeze it is hot, in the breeze it is cool or even cold. The nights are cold and may even be frosty, with a keen wind and bright starlight. They were beautiful nights as seen from a small launch, rising and falling to the lift and release of the waters, with the flicker of lightning storms of the Amazon forests reflected in the eastern sky. Strong breezes were frequent, which stirred the lake into short steep seas, and thunderstorms would whip the lake into a sudden frenzy of dark waters with a background of lightning and forbidding hills.

The high altitude of the lake is at first an inconvenience, giving a leaden and weak feeling to the unacclimatised, but this passes in a few days. But at no time had we the slightest inclination to run, and also it was a greater effort to keep a pipe alight, than at sea-level. Some of us also suspected, the writer among them, that

LAKE TITICACA.

Photograph by the author.

the altitude tended to prevent any sense of exhilaration, and to deaden one's impressions of the scenery.

The people living round the lake are predominantly Indian, the European population being concentrated in the small agricultural towns. The agriculture and all heavy work is carried out by the Indians, while administration and business is in the hands of Europeans. The Indians are bitterly poor, and degraded, men, women and children working from sunrise to sunset. The system of agriculture is feudal, all the land except that high up in the mountains, being in the hands of large landowners, who leave the management of their farm or hacienda to a major domo. The Indians have small holdings on the haciendas, and as payment for this they work so many days a week for the hacienda. The Indians are cocaine addicts, chewing "coca" the leaves of the cocaine plant, which alleviates hunger and is said to eliminate ambition. The diet of these Indians is largely vegetarian, and the potato is exceedingly important. It is interesting to note that when eating potatoes the Indians dip them into a suspension of kaolin. Kaolin appeared in 1923 in the British Pharmacopeia as an intestinal disinfectant, and it may well be that this practice of the Indians is of significance in this respect. It is well known, as some of us found to our cost, that Europeans on the Altiplano are very prone to mild intestinal disturbance.

Three tribes of Indians are found on the Altiplano, the Quetchuas, Aymaras, and Urus. The Urus are found at the south end of the lake, and are a primitive fishing people of limited number, with a dialect that relates them to the tribes of the Amazon forest. They were probably the original inhabitants of the Altiplano. The Aymaras are descendants of the people who built the city of Tiahuanaco, whose ruins can be seen to this day at the southern end of the lake. The people of Tiahuanaco were sun-worshippers and delighted to carve calendars over the gateways of their temples, and paint them on their pottery. The Quetchuas are descendants of the Incas, the civilisation which succeeded the people of Tiahuanaco, and whose glory and magnificence brought upon itself the greed and destruction of the Spanish conquistadores. The Incas were also sun-worshippers. In comparing the people of Tiahuanaco with the Incas, the analogous comparison of Greece and Rome seems justified. The grace, porportion, and poetry of the Tiahuanacan buildings, and the culture implied in their calendars

and pottery remind one of Greece. The square sensible buildings of the Incas, their roads, social system and excellent government, together with a hint of unimaginativeness all savour of the Roman.

The present day Indians in the shuffling dances, to the tune of pan pipes, the gay ponchos of the men and the fiesta dress of the women all shows traces of their former civilisation. Also they still cultivate the steep hillsides by terraces as they did in the days of the Incas. It is sad to think that these people who now stagger under the burdens of the white man, are the descendants of a nation that reached a degree of social order yet to be surpassed in South America. Moreover it has been shown that the Indians are the victims of evil treatment, and that with just and honourable treatment they can live and work as reasonable citizens.

Here and there over the countryside are the remains of a people that are utterly mysterious. They built beautiful round towers, and had pottery, beyond this nothing is known of them, and they have vanished into the limbo of the past. Or again there were the people that built the Chulpas, square tombs in the Poopo district, which present day Indians will not visit at night.

One peculiar feature about Titicaca is that it is the highest navigated lake in the world. The first steamers, the *Yavari* and *Yapura* arrived on the backs of mules in 1870, these were followed later by the *Coya* and *Inca*, and lastly by the two thousand ton diesel driven *Ollanta*. The steamers contrast strangely with the balsa, the Indian boat built of totora reeds, and dating back to Inca times. As in the days of the Inca the balsa is the main mode of transit between the Indian villages. The scarcity of wood at the north end of the lake prohibits wooden boats, but at the south end of the lake where there is contact with the wood supplies of the Bolivian Yungas the Indians build wooden sailing boats.

On land the traditional beast of burden is the llama which will carry a hundred pounds and no more. (With any greater weight they lie down.) With the coming of the Spaniards the mule and the horse appeared, and now the railway, lorry, and aeroplane are playing their parts. But even now, high up in the mountains, in the desolate regions where the ribs of the earth stick out bare and unashamed, the sure-footed llama reigns supreme.

The expedition was living on a hacienda near the lake, four hours by launch from Puno. Our cooking was done by Indians and

vegetables dominated the diet. Sheep cost only 3/- but were so stringy, owing to the lack of grass, that only the liver could be eaten. In the course of its work the Expedition ranged over to the Pacific rivers on the west and the Atlantic rivers on the east. The height range of the expedition was 17,200 down to 1,400 feet in the Amazon forest at Santa Cruz. Probably the most spectacular modes of travel in this country are lorry and aeroplane. In the flight to Santa Cruz the areoplane took off at 13,000 feet, rose to 18,000 feet to clear the flanks of Illimani (21,000 ft) with its glaciers and glittering sheets of snow. In one part of this flight we covered in two hours a stretch of country that takes a lorry three days and is impassable in the wet season. Or take for example the very important lorry road from La Paz to the Bolivian Yungas, a road which climbs to 15,000 feet to a half-frozen world, and then goes down a mountain side and in three hours brings a traveller to a sub-tropical valley bathed in the sweat-laden breath from the Amazon plains. That road was a sheer impertinence, a reckless zig-zag scratched down the face of a precipice.

Finally we may mention something concerning the biology of lakes Titicaca and Poopo. The water of Titicaca is fresh and the fauna is abundant. Its most interesting constituents are a carp-like fish and a crustacean. These are found nowhere else in the world, and moreover their nearest relatives are marine. Poopo on the other hand is a saline mud-bath, measuring fifteen by twenty miles, and nine feet deep, and with shores that ooze hydrogen sulphide at every step. No fish can live in it, only a few crustacea and molluscs.

The presence of animals with marine affinities in Titicaca has led to the theory that Titicaca is merely an arm of the sea raised up to the roof of the world. Fantastic as this may sound, it is by no means disproved, although it seems more likely that the present lake system arose towards the end of the Tertiary. The Andes appeared in the early Tertiary times, when presumably the marine lagoon would have been elevated as well. Both Poopo and Titicaca have had a much greater extent in recent times, particularly Poopo, because of its outlet being damned back by ice in Pleistocene times.

The history of Titicaca is intimately bound up with the uplift of the Andes and the theories of this phase of the earth's history are as complex as they are numerous. Space prevents a digression

into the spectacular geology with which these theories are concerned, but one may fittingly conclude this account with a quotation from Pope :—

> Oh, Sons of Earth ! Attempt ye still to rise,
> By mountains piled on mountains, to the skies ?
> Heaven still with laughter the vain toil surveys,
> And buries madmen in the heaps they raise.

H. P. MOON.

THE ORIGINS OF WESSEX.

THE period of nearly two hundred years which elapsed between the end of Roman rule in Britain and the coming of St. Augustine to Kent in 597 has always been, and probably always will be, the most obscure chapter in English history. The decline of Romano-British civilisation, the destruction wrought by marauding Picts and Scots, and the occupation of the country by bands of illiterate Germans entailed such a decay in the more civilized arts that there are few written records of the period of the English conquest, and the story of the beginnings of the English kingdoms was for long merely the jejune result of the collation of such meagre information as could be gleaned from the doleful recriminations of Gildas, the fairy stories of Nennius, the traditions which long after were recorded by Bede, and the propaganda of the early annals of the Anglo-Saxon Chronicle. But of late years it has been possible to supplement and modify these accounts based merely on written sources in the light of the findings of archæologists, anthropologists and etymologists whose long and patient work has at last made it possible to reach conclusions which are something more than tentative.

A brief attempt will be made in this article to summarise the views as to the origins of the kingdom of Wessex which recent research seems to indicate as being most in accord with the literary and archaeological evidence.[1]

It appears that the old view, based almost exclusively on the evidence of the Anglo-Saxon Chronicle, that Wessex was completely colonised by Saxons led by Cerdic, from a base on Southampton Water, must be abandoned. There are practically no Archaeological remains in Hampshire or Wiltshire to indicate an early Saxon conquest and settlement, none of those richly furnished pagan cemeteries, none of those early place names ending in-ing which elsewhere demonstrate the early presence of the invading Germans

[1]See particularly J. N. L. Myres in "Roman Britain and the English Settlements", Oxford, 1936; R. H. Hodgkin, "History of the Anglo-Saxons", Vol. 1, 1935; E. T. Leeds, "Early Anglo-Saxon Art and Archæology", 1936.

in considerable numbers. Indeed the dates which the Chronicle assigns to the conquests of Cerdic and Cynric his son fall in that very period which we know from the evidence of Gildas to have been one of profound peace following the battle of Mount Badon.

But although we can no longer assign to Cerdic and his followers the conquest of the whole of Wessex, it is still permitted to us to regard those warriors as historical personages, for the royal genealogies are now considered to embody archaic verities, and it seems highly probable that Alfred was descended from them, as he claims in the Chronicle. But apparently Cerdic was not a mighty conqueror but merely a raider, who, landing at Totton somewhere about the year 500, pushed his way across to Charford on Avon and thence to Salisbury, but without sufficiently disturbing the general peace of the first half of the sixth century for Gildas to mention the event, even if he had ever heard of it. Cerdic's raid would undoubtedly have been forgotten with scores of other such minor incursions, had it not been for the accident that from him ultimately descended the great rulers of the later West Saxon kingdom. It has been suggested with some probability that the small band which Cerdic led and which made Winchester its centre, were the Gewissae of the "Ecclesiastical History." For the main body of the West Saxons we must look elsewhere. But before doing so it must be noted that there was another minor settlement in southern Wessex at the beginning of the sixth century.

The disparate groups from the lower Rhine and Frisia who settled in Kent from the middle of the fifth century and who became the "nation of the Jutes" were the source of an expedition which, perhaps a little before the coming of Cerdic, sailed westwards along the south coast, and finding Sussex already occupied by the South Saxons, landed on the Isle of Wight and the coast of the mainland between Southampton Water and Portsmouth harbour, and established, under their leaders Stuf and Wihtgar, characteristically Jutish settlements on the Island and in eastern Hampshire.

Obviously the origins of the Saxon kingdom of Wessex cannot be found in the Jutish settlers of "Ytene"; we have seen that there is no archæological evidence of any widespread early Saxon settlement of southern Wessex; we have also to notice a significant fact: some time in the fifth or sixth century there was built a great earthwork, the Wansdyke, stretching from the outskirts of Bath due east to the watershed between the upper Kennet and the upper Avon, and this

fortification is built to ward off an attack not from the south, but from the north. Here we have a clue to the direction from which the West Saxons entered Wessex. It was not against a Cerdic raiding from the south coast that the Britons found it necessary to build the Wansdyke, but against a much more numerous and formidable band of conquerors from the north, from Oxfordshire and Berkshire.

In great contrast to the paucity of early Saxon remains in southern Wessex is the abundant evidence of early and populous settlement on the upper Thames around Abingdon, Dorchester-on-Thames, Bensington and Wallingford. Here it seems was there the material for the building up of a considerable state with Dorchester as its capital, and from this centre was Wessex colonised. How the West Saxons had previously reached the Upper Thames seems still to be doubtful, though the evidence seems better for believing that they came from the north-east by the Icknield Way (for their customs and cultural affinities seem closely allied to those of the Saxon settlers of the Fen district) than that they came along the Thames from Essex and Kent. Nor are we certain how and when Ceawlin, the successor of the humble and unimportant Cerdic became the ruler of the West Saxons. But the main outlines of the story now seem to be clear, and the careful building up of the thesis of the conquest of Wessex from the north is an outstanding example of the way in which the archaeologist can help to clarify and modify the written evidence with which formerly the historian had to be content.

R. R. BETTS.

CHESTER AND THE WEST SAXONS.

After the departure of the Romans, Chester ceased to be of any importance until its fortunes as a city of Mercia were linked with those of Wessex.

Descendants of the legionaries and Romanised Britons probably carried on its civic functions as capital of Venedotia, but there is no mention of the city until about A.D. 607 when Ethelfrith and his Angle army both captured the city and avenged a dispute between Augustine and the Welsh Monks, who would not submit to the Roman Church system.

Ethelfrith and his army drove out the King of Powis and despising the beautiful buildings utterly destroyed the city.

In A.D. 827 Egbert of Wessex conquered the Mercian Kingdom and next year led his army from Chester to conquer North Wales.

A rising amongst the Welsh in A.D. 853 caused Burhred, King of Mercia, to appeal for help to King Ethelwulf, and not in vain, for West Saxons and Mercians passed through Chester and the Welsh submitted. Burhred now married Ethelwulf's daughter.

Burhred again appealed to Wessex for aid against a mixed army of Northmen in A.D. 868 and this was granted, peace being quickly made.

During the year 875, monks from Hanbury (Staffs.) arrived in Chester with the body of St. Werburgh (who died in A.D. 690), which was laid in the Church of St. Peter and Paul (St. Werburgh's), as a protection from the Danes; her shrine was greatly honoured by the West Saxon Kings.

About A.D. 891 Alfred was in complete command of Mercia; he had abolished regal honours and entrusted the military command to Ethelred, who seems only to have been styled "Ealdorman," and who was the husband of the renowned Ethelfleda.

Hasten, who had given serious trouble on the Thames and Severn, suddenly appeared in the neighbourhood of Chester, on the Wirral between the Mersey and the Dee. The Danes had left their wives, children and booty with the East Angles and had travelled day and night to secure a position in the West. Chester was taken, Alfred sent a fleet to block a sea retreat and his army finding the Danes "within the work" destroyed their cattle and corn and intercepted all provisions. Reduced to eating horseflesh, Hasten and his men quitted the city and escaped into North Wales. Wulfric, Alfred's Horse-Thane, had the title of Viceroy of Wales. Alfred's spirit survived in his daughter, Ethelfleda.

A.D. 907 sees Chester again in Danish possession. "Saxons are complaining of harsh treatment when news arrives of the approach of Ethelfleda. Her gesiths arrive so swiftly that the Danish Lord of Chester is captured" with the city, which is now in ruins.

Ethelfleda at once ordered the repair and rebuilding of the city and walls. The Church of St. Werburgh she re-endowed.

Athelstan exacted tribute from the Welsh, visiting Chester and honouring St. Werburgh's shrine. Edgar used Chester as a regular base, and in A.D. 973 held court there and conferred privileges on the Monks of St. John's.

In 1043 when the old Saxon line was restored Chester with Mercia reverted to its former masters. It is fitting to end this note with a reminder that Harold, Earl of Wessex, used Chester for his northern army for his conquest of Wales, and that after Senlac, Chester was the last English city to surrender to the Norman Conqueror. Giraldus mentions a tradition that Harold escaped alive and returned to Chester to end his life.

W. P. LAWTON.

APOCALYPTIC WANDERINGS.

By A. J. HOLLAND.

"I heard behind me a great voice, as a trumpet" (*Revelation*).

YOU had bats in your belfry, O God,
Blind, blind, blind as the bell
Ringing aloud in its blasphemy,
Winging their way down to Hell.

You had knaves in your nave, O God.
All day they did rave
Themselves they could save
You had knaves in your nave, O God.

They did libel the Bible
With madness and gladness
And swear there's no God anywhere
Just a star in the sky that weak minds espy
Back, back to their filthy old stithy
The Smithy
Is Moloch
Who makes all the tin-tacks that they stick into God.

O God, can you hear me
O God, are you near me
O God, have you left me
Why have you bereft me
Of love of a Saviour Divine.

O God, will you have me
O God, can you save me
O God, I'll behave me.
If only you'll save me,
In time.

THE LUTHERAN CHURCH IN GERMANY.

THE relations between Church and State have always been a problem in Germany from the earliest days. When Charlemagne received on Christmas Day in the year 800 the title of Holy Roman Emperor from the hands of the Pope, he apparently never intended the ceremony to take the form it did, for he foresaw that difficulties would arise between the Pope and Emperor in the interpretation of their respective functions. And, in fact, throughout the Middle Ages Germany wasted its energies in attempt after attempt to settle the dispute that did arise. Nominally at least, Germany, like the rest of Europe, was united in the person of the Holy Roman Emperor, who claimed the right to power on earth, a claim that was disputed by the Pope in his capacity as head of the Church representing that Kingdom to which all earthly kingdoms must submit. It was a question of who had the final decision in the affairs of this world: the Pope claimed that supreme authority rested in the Church, whereas the Emperor wished to limit the authority of the Pope to matters spiritual whilst he reigned supreme in matters temporal. The conflict to-day is the same struggle in another form: where does the authority of the Church end and of the State begin?

The Lutheran Church was always closely associated with the numberless states that once made up the political entity known as Germany: this was largely due to Luther himself who firmly believed that the *jus episcopale* belonged in the last resort to the civil authorities. In each state the sovereign was held to be the *summus episcopus* and appointments were normally made by or through him. On the whole, these ruling princes have had a valuable influence on the Lutheran Church, for they worked for greater unity between the different sections and in some instances they even prevented disintegration: for example, Prussia effected in 1817 a union of the different Lutheran Churches and was soon followed by a number of smaller states. Such union did not affect either doctrine or worship; it was one of government and discipline.

Under the Republic of 1918 the Lutheran Church acquired a

freedom such as it had never enjoyed before, complete freedom, that is to say, to manage its own affairs, spiritual and material, free from any interference from the State or political influence.

Hitler, when he assumed power in 1933, immediately introduced into Germany not only a new form of government, but a new unity—better uniformity—based on his leadership principle that left no aspect of German life untouched. And it was not long before he asked the Lutheran Church to unite too, and to introduce a leadership conforming to this general National-Socialist principle. That request, in itself, was readily accepted by the Church as it was very much in accordance with the whole trend of Lutheran development. By May, 1933, a Reich bishop had been elected to the satisfaction of the majority of the evangelical pastors, but, unfortunately, not to the satisfaction of the political party that had grown up in the Church and wished to bring it closely into line with the new State not only in its outward form but also in the ideology. The German Christians, as this party is usually called, protested vigorously against the new bishop and succeeded in persuading the State to interfere in the affairs of the Church, with the result that the bishop, Herr von Bodelschwingh, was brusquely set aside and a new constitution was introduced (under Dr. Müller) without even consulting the Church. The State employed force; it deliberately sided with the German Christians in the elections that followed by allowing this party only to present its views and by arranging that Hitler should himself persuade on the radio the people to vote for the one party that suited the authorities. The results of the election are immaterial to us; suffice it to say that soon the Church was faced with demands that were beyond the power of the members as Christians to concede. The State was, we must remember, now based on the principles of blood and race and every side of German life—the educational, industrial and business worlds, the army and navy—had already been affected by these principles; and now the Church was asked, too, to introduce the Aryan paragraph (admittedly it would not have affected many pastors) to suit German honour, to remove the Crucifix from the altar in favour of the swastika, to abandon the Old Testament in the interests of this new ideology. The Church found that its very faith was being attacked, not only its form of government, and that it was called upon to defend the very basis of its existence.

There has resulted a long and bitter struggle between the Lutheran Church and the Totalitarian State, all the more bitter

in that the fundamental principles of Church and State are so completely incompatible with each other. The State authorities, so enthusiastic with their victories everywhere else, were unable to conceive of any organisation preaching ideas so directly opposed to their own, in fact, they were already growing unused to any serious opposition in the country. They did everything they could to break the opposition: they removed every method of propaganda from their opponents, stopped pastors (as far as they could) from communicating with each other or using their pulpits to explain their convictions; pastors have been forced from their positions; funds that are collected by the State on behalf of the Church have been withheld, so that the pastors were forced to rely upon the generosity of parishioners; hundreds of pastors have been imprisoned for varying periods of time; all public meetings have been hindered or stopped.

Not only is the Church subject to constant interference by the State and party authorities, but anti-Church tendencies are encouraged—apparently deliberately as far as we can judge. The youth organisations have all been merged in the national Hitler Youth under Baldur von Schirach, the man who said: "I am neither Catholic nor Protestant; I believe only in Germany." There is no doubt that the members of the S.A. (brownshirt) detachments are encouraged to leave their Churches; on the other hand members of the S.S. (blackshirts) are not allowed to be attached to any Church organisation whatsoever. Germans have told me that leaders of camps[1] often make wide detours on rout-marches in order to avoid even the sight of a Church ! Nor is it permissible for a pastor to visit or write to lads in the labour camps. It is also very striking that the Nazis have made withdrawal from both Churches far easier than ever it was under the so-called Marxist regime. The complete ignorance of Christian truths amongst both the Protestant and Catholic youth to-day owing to the absence of religious instruction in the schools, is only too evident in conversation: young people of about eighteen do not notice that the Nazi Weltanschauung is incompatible with the teachings of Christ and are frankly surprised when it is pointed out to them[2]. The fact is that they not only lack the necessary instruction but that their attention is so completely absorbed by Nazi instruction that they have no opportunity to think about such

[1]e.g. camps for teachers or university lecturers. Everybody seems to spend some time in a camp quite apart from the six months labour service.

[2]Sunday Schools in our sense do not exist, although friends in Germany informed me that both Churches are considering the question of introducing some kind of Sunday instruction for the young.

matters as religion. It is also true that in the labour camps instruction is definitely given of a pagan nature and it is here that the German Faith Movement which, based on the ideas of Rosenberg, rejects Christianity as something Jewish and therefore alien to the German mind, has had considerable influence on the German youth. Many Germans who otherwise acknowledge the benefits of the new Germany, suffer acutely under the accusation that they are opposed to the Nazi State by accepting and believing in God and His Church. Others are trying to find a way of uniting their nationalistic and patriotic sentiments with their respect for the Church as the living voice of God: hence you have the odd position of Roman Catholics becoming Lutherans as never before and the many conversions to the Old Catholic Church,[1] which to some people seems to offer a possible solution for the German Church questions.

A. Nygren[2] asks why the State tolerates the pagan spirit and especially the activities of the German Faith Movement in which these ideas have found their expression. In his answer he points out that this neo-paganism satisfies the demand of many German leaders for a movement that is suitable to the German race, whereas Christianity, in their opinion, tends to destroy the Nordic spirit with its racial doctrine. He further asks the pertinent question: Does the State see this as the best way of educating the young in the right direction for their aims? The movement undoubtedly enjoys considerable popularity amongst the young and it is, after all, not easy for them to remain unaffected by the contempt and scorn that is poured upon the Christian Churches by the youth leaders. The following notice that appeared on the signboard of the Hitler Youth at Halle on the Saale is characteristic:

> "Where are the enemies of our Hitler Youth? They are the religious fanatics who still to-day fall on their knees with wistful looks directed upward, who spend their time attending churches and praying. We, as Hitler boys, can regard only with contempt or derision young people who still to-day run to their ridiculous Evangelical or Catholic clubs to give themselves up to eminently superfluous religious reveries."[3]

[1] Exists mainly in German-speaking countries, i.e. Germany, including Austria, and Switzerland and has witnessed a remarkable revival since 1933.

[2] "The Church Controversy in Germany."

[3] For the English rendering of this and other quotations *see* the "Surveys on the Affairs of the Continental Churches," 1934-37, published for the Church of England Council on Foreign Relations.

The attitude of the German government forces one to the conclusion that it desires to have a Church that can serve as a further agency for the dissemination of its ideas. Herr Ley, the leader of the Labour Front, once said: "The party claims the totality of the soul of the German people. It can and will not suffer that another party or point of view dominates in Germany. We believe that the German people can become eternal only through National Socialism, and therefore we require the last German, whether Protestant or Catholic." The members of the Confessional Church, in an appeal to Herr Hitler in 1936, commented on these words a follows:

> "This view of life is frequently presented and described as a positive substitute for Christianity that has to be vanquished. When blood, race, nationality, and honour are thus raised to the rank of qualities that guarantee eternity the Evangelical Christian is bound, by the first commandment, to reject the assumption. When the "Aryan" human being is glorified, God's Word bears witness to the sinfulness of all men. When, within the compass of the National Socialist view of life, an anti-Semitism is forced on the Christian that binds him to hatred of the Jew, the Christian injunction to love one's neighbour still stands for him opposed to it."

Herr Kerrl even has again and again asserted that "the Church must acknowledge the primacy of the State, which wished for a positive, practical Christianity" i.e. that acknowledges that the will of the Father in Heaven is to be found in National Socialism.

There is another aspect that affects the life of the Churches: the State would probably like to see one united national Church formed enjoying State protection and embracing all the Lutheran and even the Roman Catholic Churches. One State, one Church, one Leader are slogans that appeal not only to the followers of Herr Goebbels, but also to many sincere Germans who have lost contact with, and faith in their church through the unhappy division of their country into two religious factions. Whilst I was in Germany last summer I was struck by the fact that various sections of the population constantly discussed the possibility of Herr Hitler declaring such a union not only desirable but feasible. It may seem remote and just a dream to most thinking people; nevertheless to Hitler himself as well as to his lieutenants all things are possible. It is also perhaps worth mentioning that the Church of England is

frequently referred to as the kind of Church Germany would like to have, although, it must be admitted very few Germans seem to understand its nature.

The one difficulty in discussing such a subject at all is that the government, as with so many sides of the national life, has no carefully worked out policy. It vaguely calls for unity or insists upon the application of National-Socialist principles, but leaves every leader to interpret such words and phrases as he will. The result is a conflict in more than one sense and the use of force. But coercion and threats have not brought about the unity in Church life that Hitler so fervently desires. In fact, it has only led to chaos that is rapidly becoming dangerous to both the Catholic and Protestant communities.

To-day the Church and State are struggling to decide their relationship to each other, or better said, the Church is fighting to determine its position within the State. Goethe once indicated that the crowd needs the State to order its external life, the Church to regulate its inner life. But this modern State claims to regulate both man's inner and outer life and looks upon the Church as one of its many instruments in the education of the crowd along its own lines: this is part of its totalitarian nature. The consequence is that the Church is finding it ever more difficult to get the supremacy of God acknowledged, surrounded as it is by a world in which the earthly state alone is considered the final authority. The Lutheran Church has been forced to the inevitable conclusion that, if it is to maintain its independence in spiritual matters and above all get that right acknowledged by the state, it will have to sever every connection with the state, obtain freedom from all state control and administration, and reorganise itself in a manner that is compatible with its faith and mission. German history has shown that the interference in Church affairs on the part of the State has led to disaster for the state and to the ultimate victory of the Churches. Are the Nazis now recognising this fact or not? That this stage of the struggle is now being reached is, I think, shown by the statements made a few months ago by Herr Kerrl, namely, that the State intends to bring about such a separation. But what the State means by independence we shall not know until it acts. What the Churches mean and want we know. Can they succeed against the modern propaganda machinery of the present German State?

W. I. LUCAS.

A SCANDINAVIAN VIEW OF ENGLISH UNIVERSITY LIFE.

I HAVE been asked to write some words on my impressions of English University life, a request with which I am very glad to comply. I want, however, to state from the very onset, that I have only stayed for a couple of months at an English university, and this must be taken into account and also plead my excuse if my view proves to be hasty and superficial.

One of the first things that strikes a foreigner coming to one of the smaller English universities, like Southampton University College, is the democratic spirit which reigns there. His notions of an English university is generally bound up with what he has read or heard about the most famous English university centres Oxford and Cambridge, where the aristocratic ideal is still maintained, and where the main object seems to be, not so much the imparting of knowledge as the formation of gentlemen. Therefore he is surprised to meet students coming from the same classes of society: the middle classes and the lower middle classes, just as he is accustomed to from his own university. I was rather struck by this, which, indeed was entirely new to me, and as I wanted to investigate the matter more closely, I soon found out that the majority of the students had scholarships, and thus had come with the special aim to pass their examinations in order to qualify themselves to some professional career, or, as the phrase goes, to get a job. I want to insist upon this point that the great many scholarships, which are available at English universities, naturally have a democratizing effect, enabling students from families, living in straitened circumstances, to undertake a university study, which otherwise would have been impossible to them. In this respect the English student is far better off than the student in my country, where scholarships are exceedingly small and rare, and where the majority of the students, after finishing their studies, are deeply in debt. The only thing which reminded me of my previous notions of a semi-clerical school, was the academic dress, the cap and the gown, whereof the former already seemed to be antiquated.

Another thing which also surprised me, was the young age of

the students. One of the first students I happened to speak to, was a young science student of seventeen. I certainly had a puzzled look when he told me his age, so he very kindly informed me of the schools he had frequented before coming to university, giving at the same time a brief outlook on English secondary schools. I was rather bewildered when he had finished, so many where the different schools and educational institutions giving access to university. During my further stay at Southampton I gained more insight into this maze of different schools and examinations, which lead on to university, and I still have the impression that a more homogeneous secondary education would be an advantage to the students as well as to the teaching staff.

Still another thing in the outward aspect of the university struck me: the great many women students. I had pictured to myself an English university as a secluded sanctuary where women were not allowed, and instead I found an assembly, where about half of the members were women. Whether they had come for matrimonial purposes or if it was thirst for knowledge, I dare not say, but the fact remains that the feminine courage impressed me much. Even the study of science, which in my country is regarded as being the last fortress where men are still the undisputed masters, was here overflooded with representatives of the fair sex.

During my stay at Southampton I mostly followed a course for foreigners, so I have a very faint impression of how studies are carried on by the English students. If, however, I should be allowed to impart my impressions on this point, I would first point out the short duration of the studies. I am now speaking of the students of modern languages and of science. These students, as you well know, finish their studies after a university stay of four years, including one year in the Training Department. In my country the average duration of the studies six or seven years, and they start their university career at the age of nineteen or twenty. This difference can only be explained by considering that the English university, or at least the university I have been to, seems to have an exclusively practical end, aiming only at giving the students sufficient knowledge to take up posts as teachers in the elementary or secondary school, according to the degree obtained, whereas in my country, besides the practical vocational side of the study, they also aim at a scientific education. In this connection it is worth noticing that the students have to write a thesis in their

principal subject, a work with which they are occupied for about three terms. It must also be considered that a man having only a university degree, is not allowed to enter the elementary school. The curriculum of the English students also seems to be comparatively short, philosophy, which is a compulsory subject for all students in my country, has a very humble position, and the examinations are only given two, three or four hours (in my country twelve). Upon the whole, the English student seems to have more leisure and less work than his continental colleague. He never has to stand in line in order to be sure of getting a seat in the library, he has plenty of time to smoke, play at chess, chat or flirt in the common room, in short: the struggle for life does not seem to affect him so strongly as is the case on the continent.

This is also seen in the way he is facing the problems of immediate moment. I found the English students very little politically-minded and very little interested in the social problems of the day. Perhaps I am generalizing too much, perhaps the students I came across were especially uninterested in those matters. However this may be, I had the impression that most English students lead a life of splendid isolation also when the burning problems of the moment are concerned. From what is said you may think that I ignore or intend to pass over in silence all the political and debating societies in existence. This is, however, far from being my intention. I was present at many of the conferences and debates which were held, dealing with most topical subjects, such as the situation in the Far East, the civil war in Spain, the English rule in India et cetera, but I always found that only a very small number of students attended these meetings. The great majority of them didn't seem to take any interest whatsoever in those matters.

If I should try to find the reason for this rather astonishing fact, I would mention first of all the young age of the students, secondly college life. I know that by mentioning college life I touch upon a very delicate thing. I am fully alive to the fact that college life may present some advantages. The parents can send their sons and daughters away from home, knowing that they are well provided for physically as well as morally, but on the other hand the students in college live a life of sequestration and isolation. They don't share in the life of the town and its inhabitants, and they have but small opportunities of taking part in the stirring events of the day.

On the other hand some other drawbacks which might be supposed to arise under such special conditions, the formation of a uniformed way of thinking and looking on things, did not seem to have affected the English students. They gave the impression of having saved their individuality and personal freedom. It was comforting to see that England and English universities still seemed to be aloof from the uniformity and standardization of thought and manners, which elsewhere in Europe is so regrettable an aspect.

There are, of course, many other points that might be dwelt upon: the part played by sports and athletics in English university life, the private life of the students, their amusements and pleasure-going, their attitude towards foreigners, where, strange to say, there seems to be a marked difference between the unreserved and cordial hospitability of the English outside college, and the distant and somewhat chilly reservedness of the college student, but I have to conclude owing to pressure of space.

I just want to add that I am very glad I had the opportunity of coming to Southampton University College, where I spent a most enjoyable time, thanks to the kindness of the university authorities. I feel sure that I am speaking on behalf of all the foreigners when I say that we are all very grateful, and I hope that an opportunity will soon present itself to come back, and then to the University of Wessex.

OSLO, *April*, 1938.

REIDAR KVAAL.

EXCHANGE SCHOLARSHIPS BETWEEN ENGLISH AND AMERICAN UNIVERSITIES.

(The following article is by an American Student now in residence at University College, Southampton.)

A new field of opportunity for British students is contained in the proposal for a permanent scheme of exchange scholarships between British and American universities.

For many years British Universities have maintained close contact with the great educational centers on the Continent. Official recognition of the value of exchange relations has been given in the form of scholarships to worthy students. Such scholarships are now regarded as an indispensable part of University facilities.

The possibility of extending the exchange scheme to include American Universities is proposed by the American Fraternities Exchange Commission, representing several nation-wide university organizations which maintain student hostels in some two hundred universities and colleges in the United States and Canada. The basis of the plan is that University institutions of both nations provide free residence and tuition fees each year for a certain number of visiting students. The Exchange Commission has already arranged twenty-three exchange scholarships between American and Continental Universities (Switzerland, Germany and Austria).

One such exchange has been established in England, between University College, Southampton, and the State University of Indiana. One student from Indiana University will receive free residence and tuition fees for one session at University College, and in return, a Southampton student will be provided free residence and tuition fees at Indiana. No cash payments are made to visiting students at any time, the scholarships consisting merely of an exchange of accommodations.

Several other well-known American Universities, including Chicago University, The Carnegie Institute of Technology, and the University of California, are available for exchanges under the same

plan, and negotiations are being carried on with a number of provincial Universities in this country.

This particular proposal is important, because it offers—for the first time—an opportunity for students not eligible for Rhodes, Commonwealth, Rockefeller or other international scholarships previously established to spend a year in America, and for British provincial universities to establish relations with some of the great modern Universities in the United States. Carefully selected students would go to America fully prepared to take advantage of the opportunities afforded by Universities which lead the world in some branches of science and research study.

The scheme is not proposed as an panacea for international relations, but one can scarcely imagine a project more likely to appeal to those who feel that much depends on closer co-operation between the two great English speaking nations.

GILBERT BAILEY.

WE HAVE DEBTS TO PAY.

By David Quinn.

PROUDER I am when that still warrior Death
mirrors the whole race of them that designed
heat and confusion, breaking down the walls
of privilege in state and town, removed each a brick and fell
and lay for him still.

For their history,
climbing the precipice of half-knowledge into achievement,
writes to us, commands—this is a bone, a nerve,
these the skeleton, pick knives, do not thrust here,
beware of cutting here lest you sever an artery,
strike thus and thus and strike home.

Only for them we might still shout—
O that I had learnt anatomy!
O that I had learnt the way the wheels move!
O that I could have thrust the heart's heat aside
and seen clearly! Then we might have known the gap,
laid our attack and propaganda.

And it is this, no small debt, we owe to you Death,
that you from their flesh and minds
have left for us a tower, not for retreat but vantage.
We thank you,
craving the last privilege of the condemned to choice,
that we can add to it
not lookouts but trenches round an encampment,
give you our stillness when we have
new earth cleared, ready to be turned and sown.

REVIEWS.

LAND CLASSIFICATION IN DORSET, by L. Ellis Tavener, M.A. Publication No. 6 of the Institute of British Geographers. Published for the I.B.G. by *G. Philip & Son, London*, 1937.

This work is an example of a modern type of investigation in Geography, both in its methods and in its aim. It is free from all attempts at generalization; and its bases are wholly factual. The essential part of it is the series of twenty-one maps showing the distribution in Dorset of the particular facts with which it is concerned. The three maps of Section I show "natural" facts, i.e. facts which are wholly independent of Man and his works. They are (1) the Natural Land Types and Water-Supply Zones, (2) the Rock Materials, and (3) the Rainfall. It would, of course, be very desirable, if it were possible in the present state of knowledge, to add to these three an adequate soil map. In the accompanying text the map of the Rock Materials is referred to almost as if it corresponds to such a map; and it is probably the nearest approach to a soil map at present available, as the author implicitly assumes. But in fact it maps the rocks near the surface, not the soil in which the vegetation is rooted; and it classifies those rocks in accordance with their place in the geological time sequence; so that any relation of this grouping to the composition or to the lithological character of these rocks is merely accidental. For Dorset, as for the rest of the southern quarter of England which lay outside the ice cover even at the maximum of the last glacial period, it is true that rocks of the same geological horizon are usually similar in composition and texture and that the soils formed on them are also similar in these respects; and that soil types tend to follow the geological series. But it should be remembered that this last relation holds good over only a few small parts of the earth. Over the far larger areas where the soils are "mature" their characters are more closely dependent on climate than on the underlying rocks, and this stage is approaching in some parts of the Dorset Heaths where soils are "podsolized" (*see p.* 12); while in a large proportion of the recently glaciated lands, in Britain and elsewhere, one effect of the ice has been to blur, or even to mask completely, the relation of soil to underlying rock.

The second Section includes seventeen maps showing the distribution of the chief crops and livestock of Dorset farms. A study of these maps, and the notes on them which form the text, may help the reader to avoid some common misconceptions. These maps have been compiled directly from the statistical records of the Ministry of Agriculture. They are thus entirely independent of the facts dealt with in Section I. This is, as the author notes, a very important fact in the work. It means that he has brought in facts for study from two wholly distinct sources. The main body of the text notes in this Section II are verbal statements of relations between these agricultural distributions and those of the Rock Materials; and in

a few exceptional cases it is noted where and why other factors, economic or personal, become more important.

The Third Section includes only one map, that of the "Land Use Units." This is a summary of the seventeen maps of Section II; and it illustrates, as fully as the scale allows, the characteristic farming practices and products of the several distinguishable agricultural areas defined by Mr. Tavener. There are eight chief areas, four of which are each subdivided into two or three minor areas so as to give fourteen in all. The first twenty maps are compilations from data which is available to all students, in which the author's contribution is the selection and arrangement of the material in a well-planned series. The last one is the sum of the work; and it forms a valuable and original synthesis of the results of farming in Dorset as it existed at the date of the Agricultural Returns used. The text of the third Section is devoted to concise descriptions of these Land-Use-Unit areas, and a statement of their relations to the Natural Land Types of map 1.

Mr. Tavener has not included any statement in conclusion of his work. He opened by stating that he is presenting an example of a method of land classification applied to Dorset. This he has done very thoroughly; and it is perhaps unreasonable to ask for more; but some readers might well desire a summary in which he would tell them what he considers to be the results of his work. He has made a real contribution to our knowledge of this area, and given a good example of the use of a particular technique in geographical investigation. The value of his work is not lessened by the fact that his precise conclusions as to the relations of agricultural practice to natural conditions, which within so small an area vary chiefly as to soil and water-supply, are little more than an exact statement and justification of opinions widely held by "knowledgeable" countrymen of Dorset. He has made precise what would otherwise be the uncertain and unconvincing conclusions of empirical practice. The method is applicable wherever comparable records exist; and the results form a contribution to one of the chief aims of science in that they help towards enabling men to make a better use of natural resources.

C. B. Fawcett.

Fig. I. NATURAL LAND TYPES.

From a consideration of the general physical characteristics of the county the following "natural land types" were defined:

THE CHALK UPLANDS, characterised by three features (1) the exposed, excessively drained, open downlands, (2) the hill slopes or medium elevations, often sheltered, well watered and with fair arable soils, (3) the valley bottoms, supporting rich perennial grass and hay.

THE HEATHLANDS, composed mainly of sands, gravels and clays which give rise to a rather featureless landscape—broad flats, rolling undulations, and gentle valley forms—with occasional conical, residual hills, marshlands, and sharp stream-cut scarps.

THE 'ISLE OF PURBECK'. A region of ridge and trough lands separated from the Heathlands by a narrow chalk

HILLY CLAY LANDS (WEST DOREST), characterised by marked changes of relief and soil which give rise to a number of rich valleys, both sheltered and exposed, to steep unworkable slopes and to high exposed hilltops. mixed soils.

VALE OF BLACKMOOR. A wide crescent of broad, undulating and marshy lowlands, crossed by wide winding valleys. Soils developed for the most part on stiff heavy clays.

GREENSAND ESCARPMENT. Steep slopes of gault clays, interspersed with sands and flanking the Chalklands.

SOMERSET FRINGE. A small area of faulted scarps and vales which have their fullest development in Somerset.

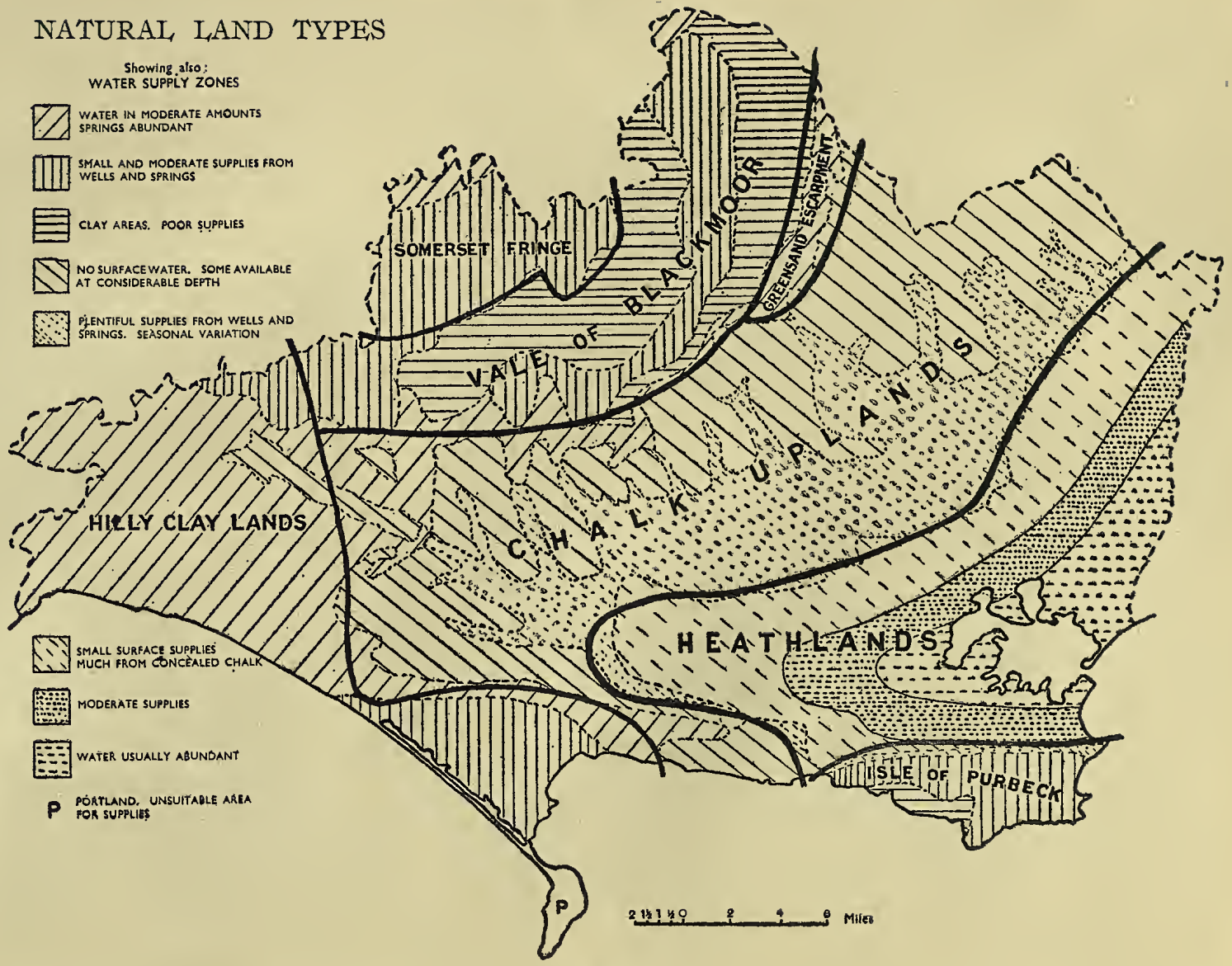


Fig. I

Illustrations by kind permission of Messrs. G. Philip & Son

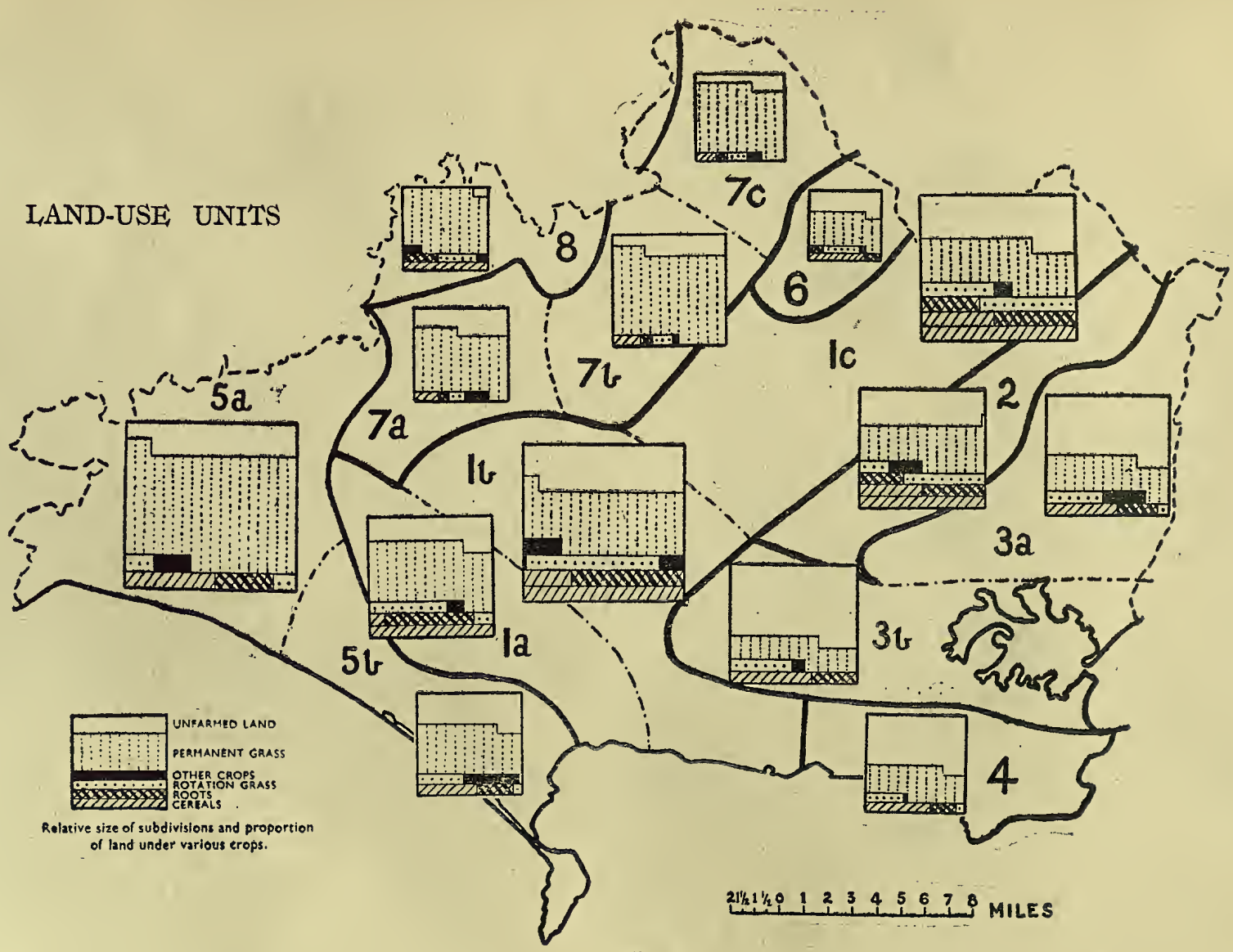
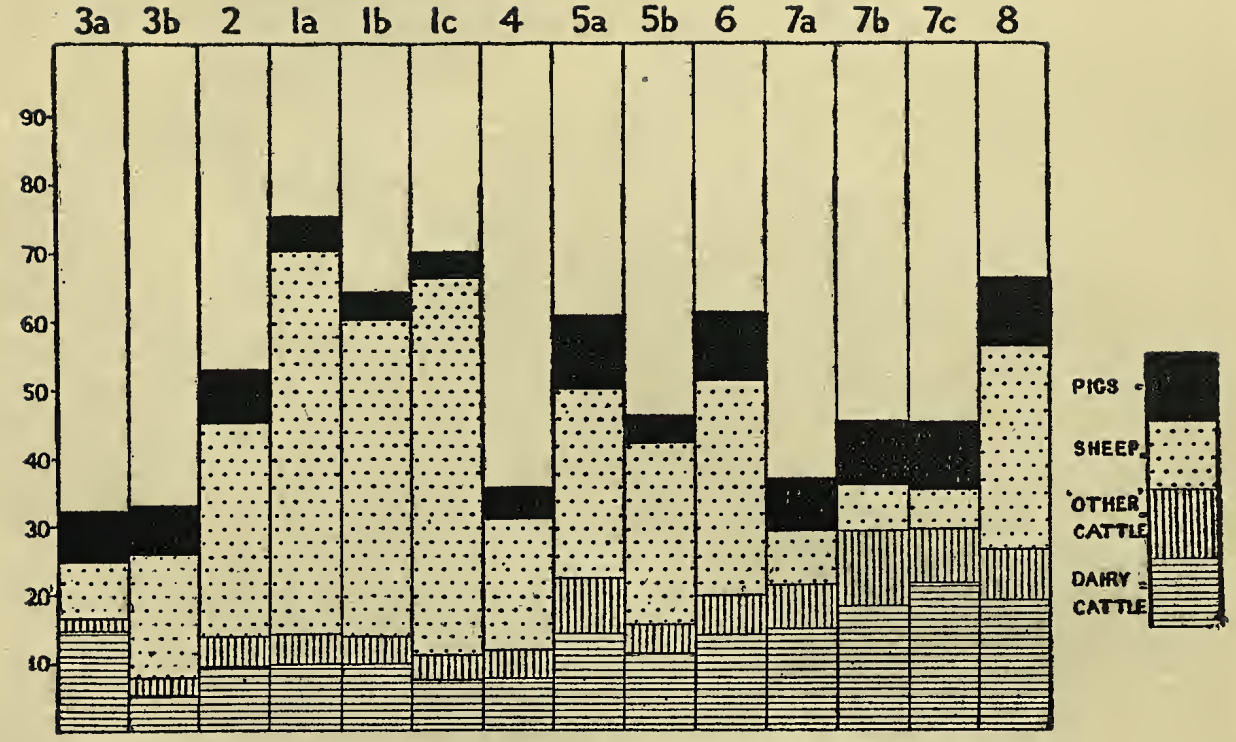

LAND-USE UNITS
7c
8
6
7b
1c
2
5a
7a
1b
3a
1a
3b
5b
4
UNFARMED LAND
PERMANENT GRASS
OTHER CROPS
ROTATION GRASS
ROOTS
CEREALS
Relative size of subdivisions and proportion of land under various crops.
2½1½1½0 1 2 3 4 5 6 7 8 MILES

Fig. II



LIVESTOCK PERCENTAGES IN LAND-USE UNITS

Fig. III

Figs. II & III. LAND-USE UNITS together with LIVESTOCK PERCENTAGES IN LAND-USE UNITS.

From figures supplied by the Ministry of Agriculture about 17 maps were drawn, each shewing the distribution of a particular crop or livestock. By superimposing these, the map of 'Land-use units' was obtained. Although there is a striking similarity between this map and the one of "natural land types" they were derived from entirely independent data. The percentages of crops in each land-use unit are shewn in the squares, whose areas indicate the relative size of the land use units: the percentages of livestock are shewn in the columns, the numbers referring to the corresponding land-use unit.

No. 1. THE ARABLE-SHEEP AREA. In central Dorset there are large areas of arable-sheep farming, in which grassland, arable land and sheep form the basis of farm practice; about one third is permanent pasture, one third arable, and the rest is unfarmed. There is a high density of sheep and not many cattle.

No. 2. THE RICH MIXED SOILS REGION. A rich and important area of mixed farming fringes the south-eastern edge of the Chalk Uplands. The higher gravelly and sandy soils are used for sheep rearing; the heavier soils for arable cultivation; while the heaviest soils are mostly under permanent pasture. Much land is under arable cultivation, with a variable five-course rotation.

No. 3. THE WASTELANDS. A sparsity of farms characterises the eastern parts of Dorset. Much of the land is uncultivable, much is undrained bog, and there is a large acreage of waste land and of rough grazing. A number of small-holdings produce vegetables, potatoes, small-fruits, pigs and poultry.

No. 4. ISLE OF PURBECK. A fair amount of mixed arable and of permanent pasture. Soils very variable, so little wheat or barley grown. Comparatively few sheep: cattle mostly associated with the richer and better watered soils.

No. 5. HILLY MIXED CLAY LANDS (WEST DORSET). There is a rapid change in farming practice to the west and south-west of the Arable-Sheep lands. As soon as the chalk is left, open ploughland with low fences gives way to steep green field with lofty hedges. There is comparatively little waste land; there is a high percentage of permanent pasture: cattle production increases; sheep distribution varies with soil and drainage.

No. 6. THE GREENSAND EXPOSURE. Marked decrease of arable on the steep unworkable slopes; an increase of permanent pasture. A decline of sheep, and an increase of cattle on the lower sheltered and rich pastures to the north-west of the escarpment.

No. 7. VALE OF BLACKMOOR. Mostly under grass, with very little arable. An area of intense dairy farming.

No. 8. SOMERSET FRINGE. The most closely farmed region in the county. More than 90% of the total land area is under crops and grass. All cereals are important crops, and also roots especially for sheep. A large acreage under grass, forming the basis of an intense, but mixed, cattle industry.

L.E.T.

THE PORT BOOKS OR LOCAL CUSTOMS ACCOUNTS OF SOUTHAMPTON OF THE REIGN OF EDWARD IV. Edited by D. B. QUINN, B.A., PH.D. Assisted by A. A. RUDDOCK, B.A. Vol. I. 1469-1471. Southampton Record Society.

The Port Books, or accounts of local as distinct from Royal customs, have been much neglected as a source of historical knowledge. Such local duties were levied on sea borne traffic for special privileges and such services as cranage and wharfage, by the feudal lord, which in this case was the King. Southampton purchased the fee farm, and administered the duties. Many of the accounts have fortunately been preserved, together with the brokage books, which concerned tolls on land borne traffic, and the steward's accounts of the general receipts and disbursements of the town. The area within which the town levied tolls varied, but at various times included Lymington, Hamble and Portsmouth, and at one period included the area from Hurst to Langstone.

The accounts contain the names of the masters of vessels, of the traders concerned, the goods imported and exported, and the dues paid. From this information it is possible to build up the content of Southampton's trade, its development over the period, and the ports with which trading was done. Thus, the names of Newcastle, Brighton, Bordeaux, Shoreham, Itchenor and Pevensey occur within a few pages. Although there are difficulties in the way, it is possible from the totals involved to get some idea of the cycles of prosperity and depression which the town experienced.

The editorial work has been well done. The importance of Port Books is now being realised; from them it is possible both to obtain new knowledge and to correct impressions derived from other sources. The town possesses a fine series of them, and it is a plain duty to make them accessible to scholars in printed form. A great part of their value lies in having as complete a series published as possible. The editor's decision to reduce them to manageable limits by dispensing with the usual text and parallel translation in favour of a translation only, with unnecessary wording removed, was an important one, and undoubtedly correct. It is only in this way that it is possible to contemplate the publication of many volumes. The success of such a policy rests, of course, on the technical competence of the editor, and of this there is no doubt. The work has been carefully done, and the introduction is just what was required. We look forward to the second volume, which is to contain an analysis of the main branches of trade. Mention should be made of the work which has been done in working out the weights and measures used, and in interpreting the names of the various commodities. Dr. Quinn and Miss Ruddock are to be congratulated on a very successful piece of work.

The Record Society, to which we are already indebted, is performing a very valuable, and in this case pioneer service, in undertaking the publication of these Port Books. It deserves every support.

P. FORD.

THOMAS HARDY : A Study of his Writings and their Background. By WILLIAM R. RUTLAND, *Oxford, Basil Blackwell*, 1938.

It may safely be said that no lover of Hardy, however familiar he may be with his author's books and with the best that has been written about him, will fail to learn a great deal that is both new and important from Mr. Rutland. His book is

neither one more essay in general appreciation nor a guide-book for those who are still unfamiliar with the country, but an attempt to supply facts rather than impressions, even though, as Mr. Rutland admits, the two cannot always be entirely separated: facts about the origin and progress of particular works, and, above all, about the background of reading, thinking and experiencing out of which they arose.

Perhaps the most important part of Mr. Rutland's book is that where he insists, and demonstrates, that, for the shaping of Hardy's thought, "We must look to the authors whom he read, not after he was sixty, but before he was thirty-five" : not, that is to say, to the unintelligently reiterated names of Schopenhauer and Hartmann, who, since Hardy did not read German easily, only became available to him when they appeared in translation during the 1880's, but to the *Origin of Species* (1859), *Essays and Reviews* (1860), and to the works of Herbert Spencer, Huxley and John Stuart Mill. It is too often forgotten that the Victorian "complacency" of which we have heard so much was continually being assailed by a band of distinguished thinkers and ardent disciples who had resolved to follow "whithersoever the argument, like a wind, bloweth." Hardy, from his earliest years, was one of the disciples, and the many well-chosen passages Mr. Rutland has quoted from the masters will immediately remind the reader of many a page in the note-books and novels of the disciple. Huxley, for example, whom Hardy greatly admired, thus described, towards the close of his life, the principles that had guided him :

> "To promote the increase of natural knowledge and to further the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and action, and the resolute facing of the world as it is, when the garment of make-believe, by which pious hands have hidden its ugly features, is stripped off."

In a letter to the *Times* in 1906, contributing an early recollection of Mill, Hardy declared that, in 1865, "we students" knew Mill's *Liberty* "almost by heart." They knew equally well, it may be assumed, the *Three Essays on Religion*, in the first of which Mill wrote: "If the Maker of the World *can* all that he will, he wills misery, and there is no escape from the conclusion"—a passage on which, as Mr. Rutland observes, "No reader of *Tess* or of the *Dynasts* will require further comment."

But the intoxicating sense of liberation which Hardy, like other disciples, received from his masters did not last.

> *The Return of the Native* was written in 1877. By that time, the first wave of enthusiasm over the theory of evolution had spent its force, and it was giving place to a profound disillusion. For such men as Hardy, science had utterly destroyed the basis of religion. And, at least in Hardy's case, it had not left him the permanent consolation of a perpetual "progress" in its stead. It was inevitable, that he should now be writing about "the defects of natural laws and the quandary that man is in by their operation."

In 1883 he wrote of the Dorset labourer:

> "It is among such communities as these that happiness will find her last refuge upon earth, since it is among them that a perfect insight into the conditions of existence will be longest postponed.

The greater part of this review has been devoted to quotations from a single chapter: in the reviewer's opinion, this will enable the reader to form a clearer impression of the nature of the book than a more general examination would have done. The last chapter, on *The Dynasts*, is almost equally important, or rather—it is hardly too much to say—indispensable: Hardy's historical sources and the use he has made of them are carefully examined (for the first time), the importance of the part played by the Spirits is clearly and rightly emphasised, and cogent, if not absolutely convincing reasons are given for regarding this epic Drama as the crown of Hardy's achievement.

J. B. LEISHMAN.

JONATHAN SWIFT, by BERTRAM NEWMAN. *London, George Allen & Unwin, Ltd.*, 1937, pp. 432.

The great Dean of St. Patrick's, that "conjured spirit" which had such a terribly clear vision of the follies and knaveries of mankind and the rottenness of human society, is still very much alive in the twentieth century. Since 1931 five important studies of him have been published in this country alone; his letters to Charles Ford have been printed for the first time; his poems have been edited with meticulous care by one eminent scholar; and a great new edition of his prose is being prepared for the press by another; while the last phase of the work of one of the most admired of living poets has been profoundly affected by his writings. Of the five recent studies the most acute, readable and exhaustive is that of Mr. Bertram Newman, well known in Southampton as one of His Majesty's Inspectors of Schools, who, like Matthew Arnold, is also a distinguished critic of literature. In his studies of Burke and Cardinal Newman, Mr. Newman had already shown that he possessed the rare gift of combining scholarship, literary criticism and biography in such a way as to produce not mere dissertations for the use of fellow scholars, but readable books which the specialist can enjoy for their illuminating judgments and distinguished style and the layman as fascinating records of memorable men. In his study of Swift, Mr. Newman has made, perhaps, an even more effective use of this method than in his previous books. It is perhaps, the most complete portrait of Swift that any biographer has hitherto produced, a picture of the whole man as far as such a picture can be achieved at this distance of time. Here will be found everything that is significant in the old records, the early lives, contemporary anecdotes and lampoons, the gossip of Mrs. Pilkington and others and the stories which are told about the Dean in Dublin, where he still lives in the popular memory; above all, Mr. Newman has made constant and most effective use of Swift's own writings and has wisely allowed Swift to speak in his own words as often as possible. Yet this book is not, like many scholarly works, a kind of patchwork into which many diverse elements have been painfully fitted. It is a really well constructed and coherent narrative which carries the reader forward on a fine flowing tide from Moor Park and Laracor to the great days of the Harley-St. John ministry in London, the mingled heroism and comedy of Dublin and the tragedy of the last years, more terrible than any Shakespearian or Sophoclean conclusion. Mr. Newman's insight and power of lucid exposition may be judged from the following passage on Swift's religion:—

"In his sense of the majesty and awfulness of the Deity; in his sense of the folly and evil existing in the world of men; in his emphasis on the arid creed of duty; in

his apparent insensibility to the sacramental side of worship, we may perhaps find in Swift traces of a type of religion which he himself repudiated with scorn. In his very hatred of emotional religion we may, as remarked earlier, suspect a consciousness of potentialities in himself which he had, for the sake of his own sanity, to suppress. By conviction he was a Churchman; by temperament he seems to have been something rather like a Calvinist. The God whom he worshipped—we can hardly doubt it—was a God of wrath and terror, the Jehovah of the Old Testament, the Great Task-master of those Puritans whom he hated so much; his religion was a religion of fear with, very likely some admixture of superstition."

His description of the outlook of the Swift of Gulliver's travels could hardly be bettered:—

"Swift views the world of men, it has been said, from a "planetary distance"; but it is a misleading comparison. It suggests ideas of remoteness, of the earth conceived as an atom in the vastness of the universe—all of which were quite foreign to him. His view of the human herd is minute, and at close range. Men are not related to anything outside themselves; they act against no background of elemental forces; they are not the victims of any cosmic process; Swift's pessimism is not that of Hardy or of Schopenhauer. The drama which is being enacted on the world's stage is, he once said, "A ridiculous tragedy, the worst of human compositions"; of that drama the villain is man.

This book should be carefully studied by every serious student of eighteenth century literature. It can be read and enjoyed by any educated man or woman, who will find it the best possible introduction to the writings of one of the greatest English authors.

V. DE S. PINTO.

THROUGH THE COBBLER'S WINDOW. Stories from Hans Sachs retold by E. OULESS, illustrated by RUTH COBB. *Sir Isaac Pitman & Sons, Ltd.*

THE LAUGHING HOUR. Written and illustrated by M. FORSTER KNIGHT. *Sir Isaac Pitman & Sons, Ltd.*

Two attractive children's books come from Pitman's.

Through the Cobbler's Window is a collection of stories from Hans Sachs, told by E. O. Ouless, and illustrated by Ruth Cobb, and is designed for older children. Most of the stories deal with very familiar themes,—the roguery of thieves, the stupidity of country bumpkins, the adventures of animals that are really extremely human: the plot in almost every case turns on the out-witting of one character by another. They are full of picturesque detail and amusing incident, and are told straightforwardly and well. The illustrations are plain line-drawing and are excellent of their kind.

The Laughing Hour, written and illustrated by M. Forster Knight, is a book of verses for the very young. The volume is as cheerful as its title implies, especially in the gaiety and spirit of many of its illustrations. The verse is occasionally rather laboured, but *The Water Rat's Lament* and *The Spoilt Cats* go with a swing. The rhymes and songs are mostly very slight, but one or two of them are set in prose stories which have more in them and are lively writing.

The type and spacing and general lay-out are good in both these books.

R. B. H.

The Editor of "WESSEX" begs to acknowledge with thanks, receipt of the following periodicals: *The Durham University Journal, The Gobli, The Kent County Magazine, The New Northman (Queen's University, Belfast) The Rydeian, The Southampton Girls' Grammar School Magazine, The West Saxon.*

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